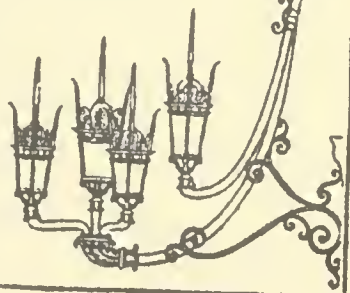


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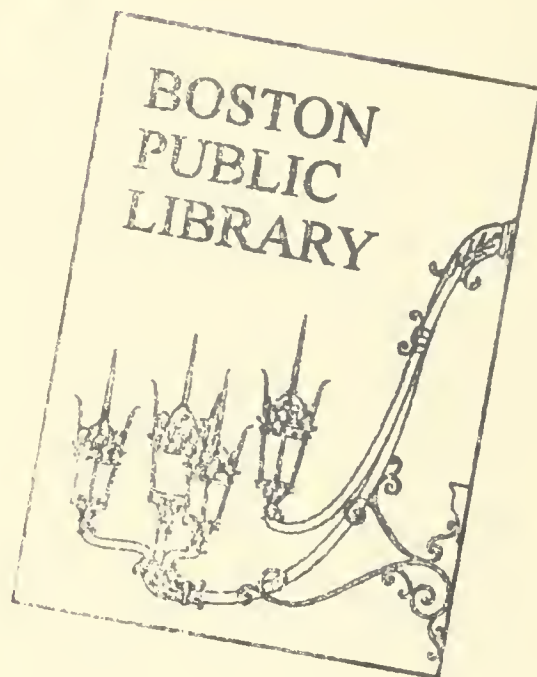




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Supplement
to
Draft Project Impact Report

[62188]





SUPPLEMENT
TO
DRAFT PROJECT IMPACT REPORT

Submitted to the
Boston Redevelopment Authority

Submitted By
Tremont Place Realty Trust

21 June 1988

INTRODUCTION

The Supplement to Draft Project Impact Report (6/21/88) contains information requested by the Boston Redevelopment Authority in its Preliminary Adequacy Determination dated 31 May 1988. The Supplement together with the Draft Project Impact Report (3/14/88) constitute the Final Project Impact Report for 165 Tremont Street.

[062188]

1. INTRODUCTION

The Department of Health Services (DHS) is pleased to announce the release of the final report of the study conducted by the Center for Health Services Research and Promotion (CHSRP) on the effectiveness of the health care system in the State of California. The report, titled "Health Care in California: A Report on the Effectiveness of the Health Care System," was prepared by a team of experts in the field of health care delivery and evaluation. The report provides a comprehensive overview of the current state of health care in California, including a detailed analysis of the challenges facing the system and a series of recommendations for improvement. The report is intended to serve as a resource for policymakers, health care providers, and the general public. It is available in both print and electronic formats. For more information, please contact the Center for Health Services Research and Promotion at (916) 221-1234.

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Utilities Letters

Exhibit A

Discontinuance Plans

Exhibit B

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Exhibit C

UNITED STATES GOVERNMENT

17

Department of the Interior

Geological Survey

Washington, D.C.

WATER RESOURCES DIVISION

18

Hydrology and Water Resources

Washington, D.C.

Division of Hydrology

Washington, D.C.

Division of Water Resources

Washington, D.C.

Division of Water Resources

I. TRANSPORTATION



Preliminary Adequacy Determination
31 May 1988

I. TRANSPORTATION

(A) Traffic Management Element

There are several discrepancies with respect to the data presented which need to be resolved. On page 4-4, work walk trips per unit is given as 0.39 and auto trips as 0.58, whereas on page 4-1, work trip mode split shows walk trips to be over twice auto trips (57% vs. 24%). In addition, total daily vehicle trips are given variously in the Access Plan as 129 and 139. Finally, on page 7-2, it is unclear why, if all 35 peak period vehicles use Tremont Street, the average hourly addition is only half or 17.5 vehicles. The 35 peak period vehicles are for each peak period. These discrepancies should be either clarified or corrected in the FPIR.

Some public comments received expressed concern over the capacity of Mason Street to accommodate added traffic sufficient to ensure delivery and trash vehicles' access to the adjacent Tremont-on-the-Common building. Any existing problems of circulation on Mason Street should therefore be documented in the FPIR. In addition, the Mason/West Street intersection should be analyzed given that it is to be the route of egress from the Parkside developments.

In addition, public comments received expressed concern over the trash removal plan for the building and its impact on traffic flow. Details on the trash removal plan should be provided in the FPIR, along with any mitigation measures.

(B) Parking Management

The analysis of parking impact fails to respond to the following elements of the scoping determination:

- (1) The impact caused by parking spaces displaced by the

- project;
- (2) The impact on parking demand of the time and mode characteristics of visitors to residents of the project;
 - (3) A description of how the total parking supply will be allocated among the three categories of demand (residential, visitor, commercial).
 - (4) The access, curbcuts, and/or sidewalk changes required; and
 - (5) The number, location, and dimension of loading docks.

The standard drawn from the TOC survey of garaging 79% of resident-owned cars on-site is not acceptable. Demand generated by the Parkside projects must be determined and the impacts of this project-generated demand mitigated. Mitigation measures could include accommodation of all project generated demand on-site.

The conclusions drawn with regard to (1) minor demand for visitor parking due to the convenient location of the project and (2) visitor demand coinciding with low resident demand are unsubstantiated, and therefore, the conclusions drawn are inadequate.

Allocation of the parking supply is unclear. The number of spaces allocated by use changes in different sections of the documents. For example, the break-down between commercial and visitor parking spaces is given variously as 4/10 in one section of the document and 7/17 in another.

The use of off-travel areas for visitor parking is not acceptable; visitor parking must meet all code requirements for parking with respect to square footage allocation, design, clearances, etc.

As proposed, operation of the garage depends exclusively on valet service as residents are restricted from parking or retrieving their own cars. Valet service must be adequate to prevent queuing of vehicles entering the garage into the public right-of-way. According to Section 8.2.2., one valet will be on duty at all times with a second and additional part-time valet at peak hours, as required. The developer should substantiate that parking demand will, in fact, be adequately serviced by the number of valets proposed. Information should be provided about the amount of time required for a valet to park/retrieve a vehicle. The capacity of the porte cochere to accommodate stacking of vehicles should be given.

The proposed car rental scheme may discourage auto ownership. This scheme should be developed more fully in the FPIR.

A parking analysis should be submitted which shows whether the project conforms to the interim zoning planning objectives. In order for the Authority to determine whether the project is in substantial accord with the interim zoning, the project proponent should show that the project compl~~es~~es with the City's objectives regarding parking, as outlined above.

(C) Construction Management

The report (page 8-5, 8-6) refers to possible street occupancy during construction. The BTB takes this opportunity to reiterate that no street occupancy permit will be granted for Tremont Street.

Exhibit A



PARKSIDE EAST AND PARKSIDE AT MASON PLACE

This document is a supplement to the Draft Project Impact Report for the Parkside projects; together these documents serve as the Final Project Impact Report. The remainder of this document provides the additional materials requested by the Boston Redevelopment Authority and the Boston Transportation Department in their Preliminary Adequacy Determination. Each component of the Draft Project Impact Report which was determined as insufficient in the Preliminary Adequacy Determination is addressed below.

RESPONSES TO BRA COMMENTS

I. Transportation Component

A. Traffic Management Element

Comment

The Preliminary Adequacy Determination found inconsistencies with respect to the numbers used for work walk trip generation rates (1.39 and 0.39) and the total daily vehicle trips (129 and 139). These discrepancies are typographic errors.

Response

- Work walk trips per unit should be 1.39 on page 4.4.
- Total daily vehicle trips generated by Parkside East should be 139 on page 7-2.

Comment

The Preliminary Adequacy Determination found the discussion about the number of peak period vehicles and peak hour vehicles on Tremont Street unclear.

Response

- Thirty-five vehicles will be generated by Parkside East during each two hour peak period. Thus, during either peak hour roughly half of these trips will be generated.

If all these vehicles use Tremont Street, the project will add 17.5 vehicles during the peak hour.

Comment

The Preliminary Adequacy Determination reiterated public concerns about the capacity of Mason Street for accommodating added traffic sufficient to ensure delivery and trash vehicles' access to Tremont-on-the-Common.

Response

- The proponent will, to the extent feasible, use the same trash removal contractor as Tremont-on-the-Common to coordinate trash pick-up in one vehicle. Additionally, the proponent will work with the BRA to develop a schedule for deliveries to avoid peak hours.
- Traffic on Mason Street does not affect access to Tremont-on-the- Common's garage.
- The intersection at Mason Street and West Street is a "T"-intersection. Both streets are one-way facilities: West Street is one-way westbound and Mason Street is one-way northbound. Both provide one lane of traffic, with an approximate width of 12 feet. Parking is allowed on both streets. Manual traffic counts were performed at this location between the hours of 4:00 and 6:00 PM. The peak hour was found to occur between 5:00 and 6:00 PM. West Street had a volume of 338 vehicles, and Mason Street had a volume of 54 vehicles turning left onto West Street (the only permissible movement). Using the methodology outlined in the 1985 Highway Capacity Manual for unsignalized intersections, the facility was calculated to operate at level of service "A" with a reserve capacity of 552 vehicles.



Exhibit B



B. Parking Management Element

Comment

The Preliminary Adequacy Determination defines the need to address the impact caused by parking spaces displaced by the project.

Response

- The project results in the loss of two parking spaces. One of the spaces, however, was previously used exclusively by the occupant of 172 Tremont. Thus, the impact of displacement of these spaces is negligible.

Comment

The Preliminary Adequacy Determination requests clarification of the impact on parking demand of the time and mode characteristics of visitors to the residents of the projects.

Response

- Visitors' (to the proposed project) vehicles will be accommodated in the garage. The details of visitor parking are discussed in Section 2 below.

Comment

The Preliminary Adequacy Determination requests a description of how the total parking supply will be allocated among residential, visitor and commercial demand.

Response

- The 275 spaces in the Parkside garages will be allocated such that a minimum of 11 spaces are reserved for visitors to the buildings. The remaining 264 spaces will be available for sale to residents of Parkside. Visitor cars will also be accommodated in vacant resident spaces.

Comment

The Preliminary Adequacy Determination requests a description of the access, curbcuts and/or sidewalk changes required.

Response

- Access will be provided via Mason Street, and will require curb cuts. Both access and egress to the garage will be provided via a porte-cochere off of Mason Street, requiring one curb cut for access and one for egress.

Comment

The Preliminary Adequacy Determination requests identification of the number, location and dimension of loading docks.

Response

- The proposed project does not include any loading docks.

Parking Management Element: Additional Comments

Comment

The Preliminary Adequacy Determination requests replacement of the T-O-C parking demand rate with Parkside-specific rates. Additionally, it requires mitigation of the impacts of project-generated parking demand.

Response

- Parking demand rates at Parkside West as of April 1988 are exemplified by the sale of 71 units and 63 parking spaces for an average of 0.89 spaces per unit. Thus, projected demand for the three Parkside projects is 225 of the 275 parking spaces, and all project-generated demand will be accommodated on site.

Comment

The Preliminary Adequacy Determination requests evidence to support the conclusions that visitor parking demand will be minor and will coincide with low resident demand.

Response

- The 1985 ITE Parking Generation report shows an average peak parking rate (including visitor parking) for residential condominiums of 0.95 spaces per unit. This rate is based on a survey of peak occupancy at 18 condominium buildings. The 1987 ITE Parking Generation report shows an average peak parking rate of 1.11 spaces per unit. However this rate is mostly based on suburban California areas where auto ownership and parking needs are substantially higher than those in Downtown Boston. These rates compare with the 1987 ITE rate of 0.88 spaces per unit for high rise apartment buildings in or near major central city areas. We would expect peak parking demand for the Parkside projects to range between the high rise apartment and suburban California condominium rates of 0.88 and 1.11 spaces per unit respectively, and the 0.95 spaces per unit (1985) rate can serve as a reasonable estimate of peak parking demand. Given this level of demand, the number of spaces provided at Parkside (1.09 spaces per unit) is more than adequate to accommodate peak parking demand for both residents and visitors.

Comment

The Preliminary Adequacy Determination requests clarification of the allocation of parking supply.

Response

- The 275 spaces in the Parkside garages will be allocated such that a minimum of 11 spaces are reserved for visitors to the buildings. The remaining 264 spaces will be available for sale to residents of Parkside, but can be used for visitors' cars when vacant. No spaces will be reserved for commercial parking, as the types of retail spaces in the Parkside buildings will not generate new vehicle trips and the proponent does not want to encourage employers or customers of the retail establishments to bring their automobiles into the area by providing convenient parking.



Comment

The Preliminary Adequacy Determination states that the use of off-travel areas for visitor parking is unacceptable.

Response

- Eleven spaces which meet all code requirements will be reserved for visitors. Additional visitor cars will be parked in vacant resident spaces, if necessary.

Comment

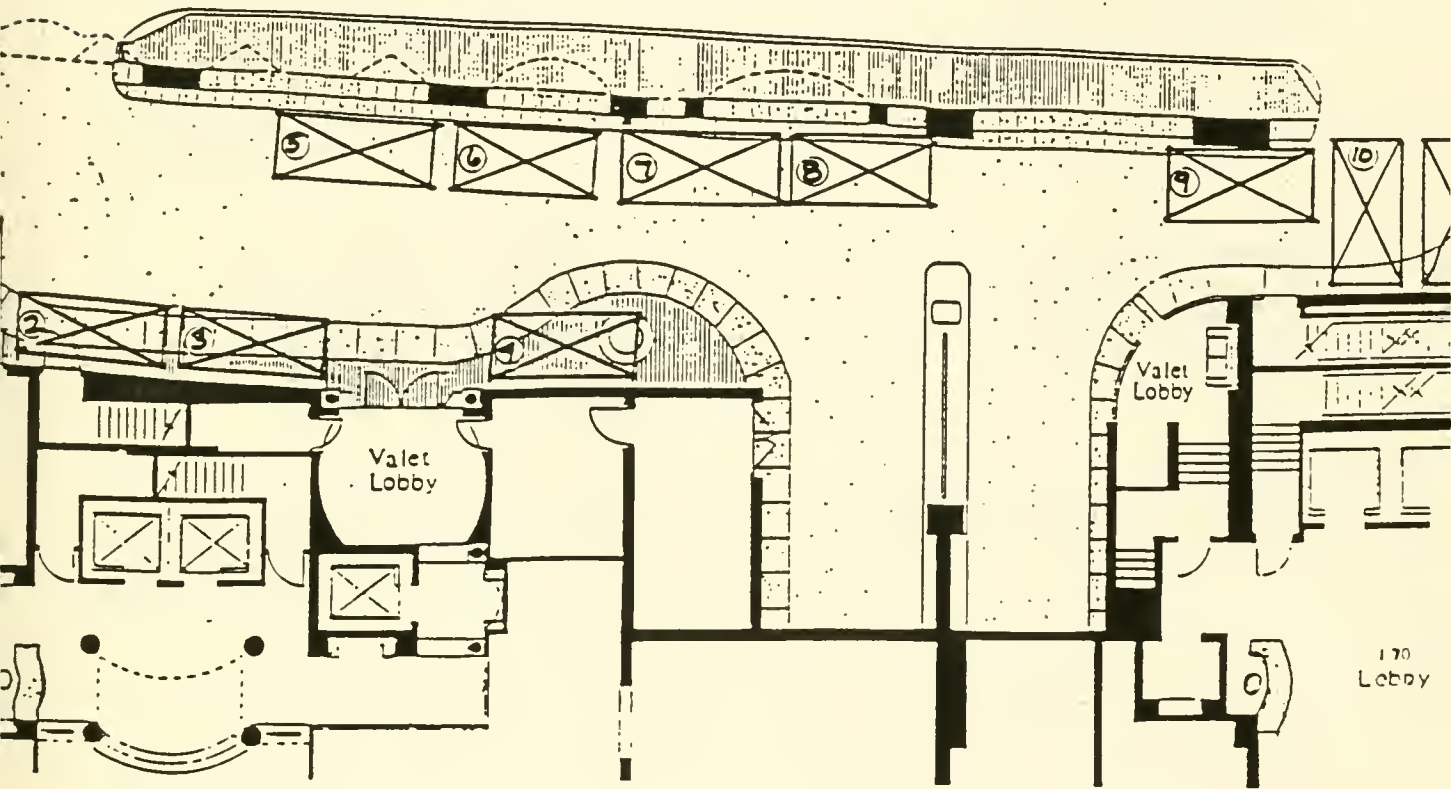
The Preliminary Adequacy Determination requires substantiation of the fact that parking demand will be satisfied by the number of valets proposed. Additionally, the capacity of the porte cochere to stack vehicles was requested.

Response

- The average handling time for a valet operation ranges from 2 minutes and 52 seconds to 4 minutes and 32 seconds, according to the Eno Foundation ("Traffic Design of Parking Garages," 1957). This range includes large facilities which require tickets and payment on entrance and exit, respectively. Thus, the average handling time at Parkside is expected to be toward the lower end of this range. As a conservative estimate, if we assume that the average handling time at Parkside will be 3 minutes and 30 seconds, each attendant will be able to handle 17 cars per hour. One valet will be on duty at all times at each of the Parkside garages (i.e., two valets will be on duty at all times). An additional part-time valet and, if required, two part-time valets will be available at peak hours. Thus during the peak hours when a minimum of three attendants are on duty, a minimum of 51 cars/hour can be handled. Additionally, the porte cochere can accommodate **11** vehicles, to prevent queuing of vehicles entering the garage onto Mason Street.



Mason Street



165 and 170 Tremont

Visitor Stacking and Parking
for
Porte Cochere

Comment

The Preliminary Adequacy Determination requested exploration of alternatives to the proposed use of Tremont Street for off-loading.

Response

- Mason Place will be used for loading during move-in, and most later deliveries will be made with smaller trucks and vans which can use the north parking lane of Avery Street. Additionally, occasional use of Mason Place to accommodate move-in and move-out activity is being explored.

The proponent has attempted to provide and price parking at a level which is adequate to accommodate all site-related vehicles (both resident and visitor), but which also encourages residents not to own cars by:

- pricing spaces at a level which does not encourage car ownership.
- pricing second spaces at a higher rate to discourage two auto households.
- providing on-call car rental service to residents to eliminate the need for auto ownership. This service allows residents to arrange car rentals through the Parkside concierge. The car will be delivered to the resident at Parkside.

I. TRANSPORTATION COMPONENT

(B) Parking Management - Car Rental Service

In a further effort to reduce the need for resident auto ownership, the developer will implement a plan whereby it will provide on-call car rental service to Parkside residents.

Under that plan, the Parkside concierge will make available to residents information concerning the availability and cost of rental vehicles. Should a resident require a rental vehicle, the concierge will make the appropriate arrangements with the rental agency for both procurement and return of the vehicle.

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RESPONSES TO BTB COMMENTS

Traffic:

Comment

The Preliminary Adequacy Determination requests a comparison of existing traffic volumes on surrounding streets with forecast project-generated trips.

Response

The Parkside East and Parkside at Mason Place projects are estimated to generate a total of 46 trips during the AM and PM peak hours. Due to the street pattern in the vicinity of the site, all site-generated traffic must use Tremont Street. For this reason, it is assumed that all trips will pass through the Tremont Street/Boylston Street intersection. At this intersection it is estimated that 40% will use Boylston Street to the west, 10% will continue straight through on Tremont Street, and 50% will use Essex Street.

Four of the six intersections analyzed in the Lafayette Place Study will be impacted by the proposed project. Table 1 shows the total existing entering volumes as presented in the Lafayette Place Study. The increase of each, due to the proposed project. The added traffic attributable to the project is minimal, averaging 2.5% in the AM peak and 2% in the PM peak.

The effect of these added trips on the operation of any of these intersections will be minimal.

TABLE 1

<u>Intersection</u>	<u>Peak Hour</u>	<u>Existing Total Entering Volume</u>	<u>With Parkside Total Entering Volume</u>	<u>Percent Increase</u>
Boylston St./ Tremont St.	AM	1629	1675	2%
	PM	2202	2248	2%
Kingston St./ Ave. de Lafayette/ Essex St.	AM	547	573	5%
	PM	872	898	3%
Essex St./ Harrison Ave./ Chauncy St.	AM	1044	1070	2%
	PM	1149	1175	2%
Surface Artery/ Essex St./ Lincoln St.	AM	2672	2698	1%
	PM	2974	3000	1%

Parking:

Comment

The Preliminary Adequacy Determination questions the comparability of T-O-C and the Parkside projects in terms of parking requirements and trip generation.

Response

While the Tremont-on-the-Common survey showed that 41% of the residents are 50 or older, it also showed that there are 1.2 workers per unit (as compared to the average occupancy of 1.5 persons per unit). Thus, it is not expected that the number of peak hour trips would be significantly higher than those given the Tremont-on-the-Common trip generation rates. Additionally, parking demand (based on Parkside West sales) is currently 0.89 spaces per unit. Finally, as was discussed in response to the BRA Parking Management Element, the peak parking rate is expected to be approximately 0.95 spaces per unit.

Comment

The Preliminary Adequacy Determination questions the demand for and provision of commercial parking demand.

Response

Parking will not be provided for shoppers because the retail space at Parkside is not expected to generate any new trips into the area, but merely to attract shoppers who are already in the area for another purpose. Additionally, provision of parking for shoppers will only encourage more vehicle trips into the area, an effect which is contrary to the City's objectives.

Comment

The Preliminary Adequacy Determination requests clarification of the visitor parking accommodations.

Response

Visitor parking was discussed in the responses to the BRA comments (Section B.2).

II. ENVIRONMENTAL PROTECTION

Preliminary Adequacy Determination
31 May 1988

II. ENVIRONMENTAL PROTECTION COMPONENT

(A) Wind

The wind study indicates that mitigation measures are required to reduce winds at locations 8, 10(b), and 23 to acceptable levels. Mitigation measures include construction of a solid gate at the entrance to the Mason Place plaza and tree plantings along Tremont and Avery Streets. A stated commitment to provide these mitigation measures should be included in the FPIR.

In addition, the velocities given in Tables 3 and 4 do not appear to agree with the velocities given in the seasonable tables in Volume II, from which it is assumed they were devised. The tables 3/4 velocities (annual) are somewhat lower, in some cases significantly lower (e.g., Station 6, planned). The FPIR must correct this apparent discrepancy or provide a satisfactory explanation for the differences.

Page 4 of the wind study report notes an "Attachment A," but this attachment was not included with the submission. This attachment should be submitted with the Final PIR.

Except for the corrections noted above, the wind impact analysis submitted is sufficient in describing the pedestrian level wind impacts of the proposed project and is substantially in accord with the scoping determination.

(B) Shadow

In the FPIR, various technical errors in the Shadow Study should be corrected. These include the key which is mislabeled throughout the study with respect to existing buildings and Parkside buildings. Furthermore in some studies, shadows shown for an existing building are toned for a Parkside building and vice versa. (See, for example, June 21 3:00 p.m.). All studies should be

rechecked for accurate presentation.

In addition, the statement on page 16 of the Submittal Report is incorrect in stating that the project "will increase the length of shadow on the Common for brief periods during the morning hours, but will have no effect after noon throughout the year." (emphasis added). On the contrary, the shadow drawings clearly show that the project (together with Parkside West and Mason) will increase shadow on the Common throughout the morning hours throughout the year and except from late spring to late summer, these shadows will last into the early to mid-afternoon. The FPIR should correct this statement.

Furthermore, the statement that these shadows would not have any material impact on the Boston Common plant life should be supported with appropriate documentation.

Except for the corrections noted above, the shadow analysis is sufficient to determine the shadow impact of the proposed project and is in accord with the scoping determination.

(C) Noise

An evaluation of ambient noise levels to determine conformance with HUD standards has not been submitted and therefore this section is insufficient.

In addition, public comments received expressed concern about potential noise impact on residential units at Tremont-on-the-Common from the rooftop mechanical rooms. Therefore, a noise analysis and impact assessment of the mechanical equipment should be submitted to ensure that there are no adverse impacts on adjacent residential units.

(D) Construction Impact

The construction impact submission is sufficient. However, public comments received expressed concern about the location of trash disposal equipment and its impact on traffic flow during construction. This should be addressed in the FPIR.

(E) Air Quality

The air quality analysis is insufficient in that an evaluation of ambient air quality to determine conformance with NAAQS has not been submitted. The other air quality items in the scope have been adequately addressed.

(10) Air Quality

The air quality analysis is presented in that an evaluation of ambient air quality is required. The analysis will show the air quality in the area and the air quality in the area is shown in the air quality analysis.

Exhibit A



II. Environmental Protection Component

(A) Wind Mitigation Measures

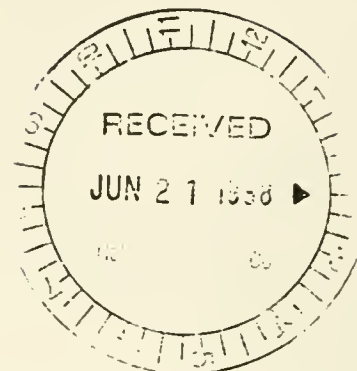
The wind tunnel testing was performed measuring ground level wind velocities at points selected by the BRA staff. The base test with the buildings only indicated certain spots at which wind levels were increased significantly above the existing threshold. The proposed buildings (165, 170 and 172 Tremont Street) were retested in the tunnel employing various wind mitigation measures and it was determined that no velocities were created above 31 mph which is the BRA suggested maximum effective gust velocity. This is discussed in detail on page 17 of the "Quantitative Assessment of the Wind Effects of the proposed East Tower and Parkside at Mason Street" prepared by Technology Integration and Development Group and submitted as part of the Draft Project Impact Report for both Projects.

The improvements to ground level wind velocity based on the wind mitigation measures indicate that, of the 27 points tested, wind levels over the present no-build baseline are increased on an average of 3.17 mph at eight (8) test points and decreased over the present no-build baseline an average of 6.52 mph at twelve (12) test points. Points within 3% of the no-build baseline velocities are counted as constant owing to the margin for error between actual conditions and those in the model.

The wind mitigation measures employed at Parkside are as follows:

- (1) The buildings are massed as three slender towers with slots between each mass. This allows for gradual siphoning off of the wind pressure of the horizontal vortex created by Tremont-on-the-Common as it heads southward down Tremont Street.

- (2) The surfaces of the buildings are modulated with projections and setbacks. This "roughening up" of the planar surface of the buildings causes friction which decreases some of the energy of the downward pressure of the wind against the Tremont Street facades.
- (3) At Mason Place, a 10' high operable gate will extend across the alley along Tremont Street save for a three foot wide pedestrian accessary at each end which will preserve open passage for residents of 80 Mason Street at all times. This gate will be wrought iron with clear glass insets and will be closed on days when wind pressures at the ground in Mason Place exceed a comfortable level. The management company servicing the condominium association will be responsible for the operation and maintenance of the gate.
- (4) In conjunction with the gate, trees will be employed to further ameliorate ground level winds around the buildings. Trees will be planted along Tremont Street in front of all three buildings and on the north side of Avery Street flanking the residential entrance. To further mitigate wind pressures at the rear of Mason Place, trees will be planted at the midpoint of the alley to diffuse wind in the rear to Mason Street.
- (5) Projecting awnings will be placed over the shop windows of 170 Tremont Street on the north side of Mason Place to provide additional protection for the 3'-0 wide "quiet zone" against the building which is created by a combination of the gate, trees and awnings.



20 June 1987

Hall, Davison & Company
20 University Road
Cambridge, MA 02138

Attention: Mr. Scott Levitan

Subject: Clarification of wind impact report on
165 Tremont Street

Reference: BRA letter dated 31 May 1988, p. 5

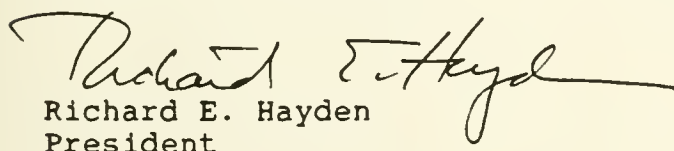
Dear Scott:

This letter provides an explanation for the BRA observation that the velocities quoted in Tables 3 and 4 of our wind report are somewhat lower than the Tables included in Volume II. The explanation is straightforward.

The data in Volume II are "raw" data which must be corrected to account for an effect called wind-tunnel blockage (i.e., the constriction of the air passage caused by the model blocking a fraction of the wind tunnel cross section). The correction in this case is 3.7%, which is systematically applied to all the data in Volume II to arrive at the figures on Tables 3 and 4. There were some cases of concern (e.g., Station 6, planned). This station, as the others, has been corrected 3.7%. We apologize for not including this explanation in the report and for any inconvenience caused by this omission.

Very Truly Yours,

TECHNOLOGY INTEGRATION AND DEVELOPMENT GROUP, INCORPORATED

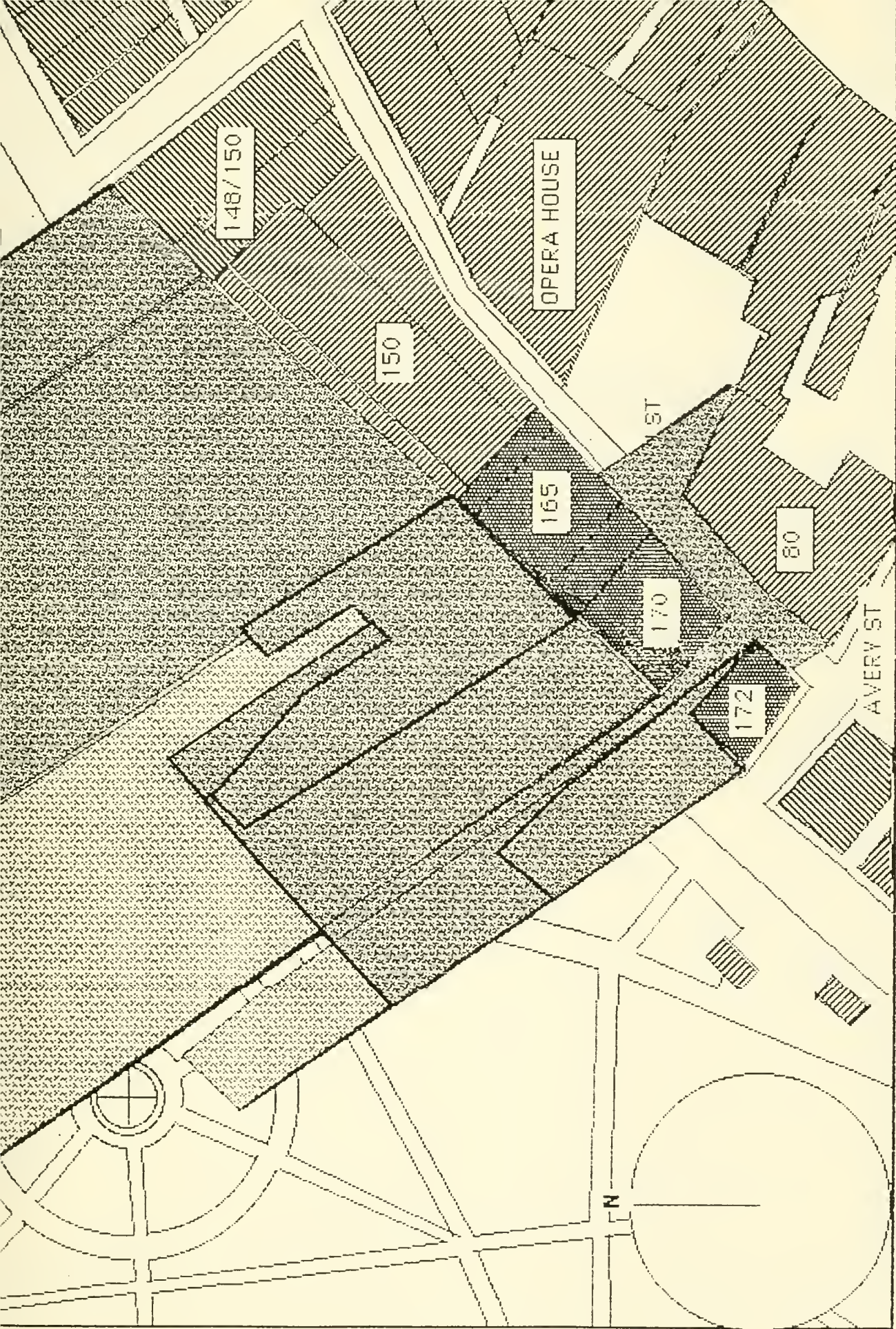

Richard E. Hayden
President

js
enclosure



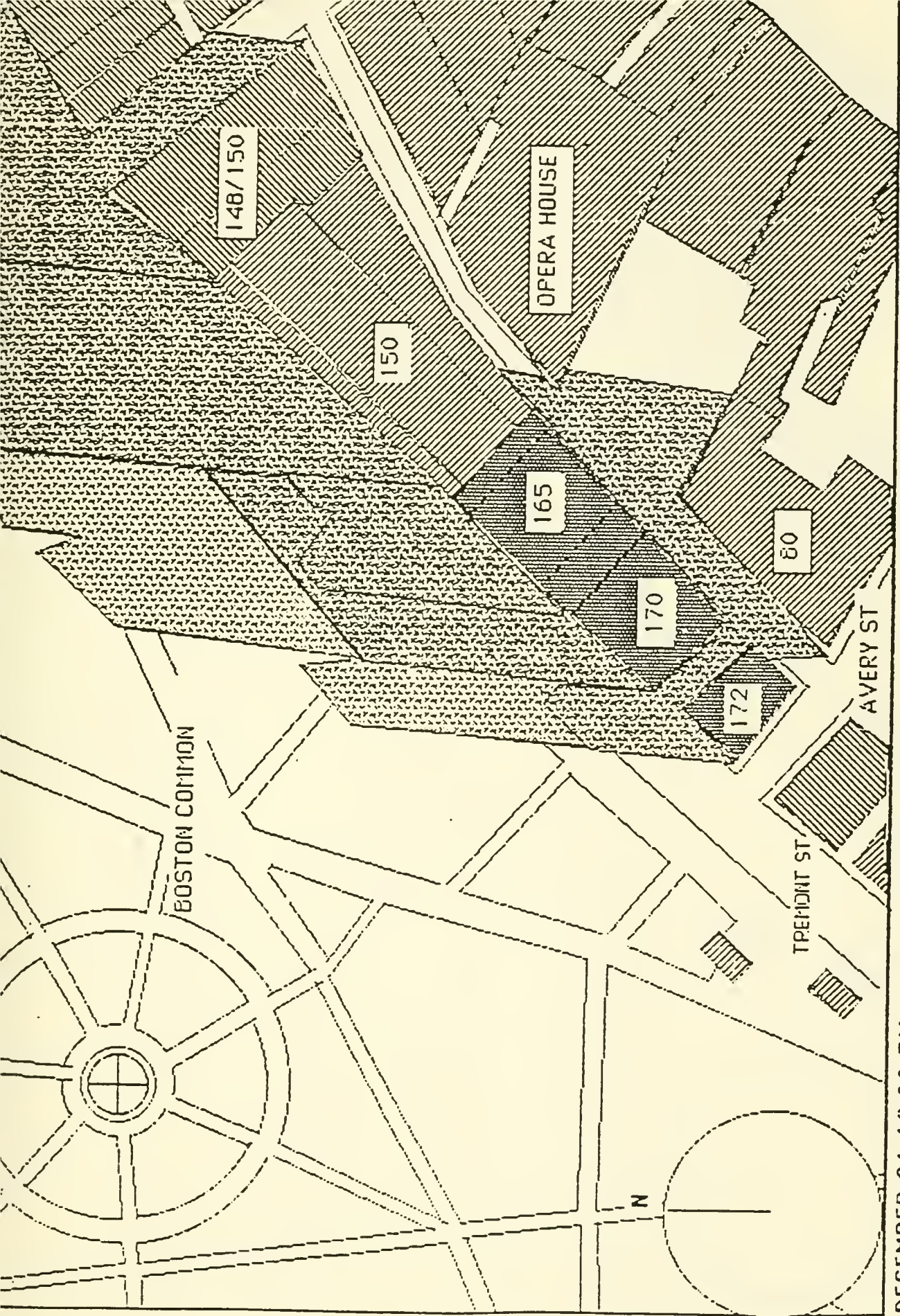


Exhibit B



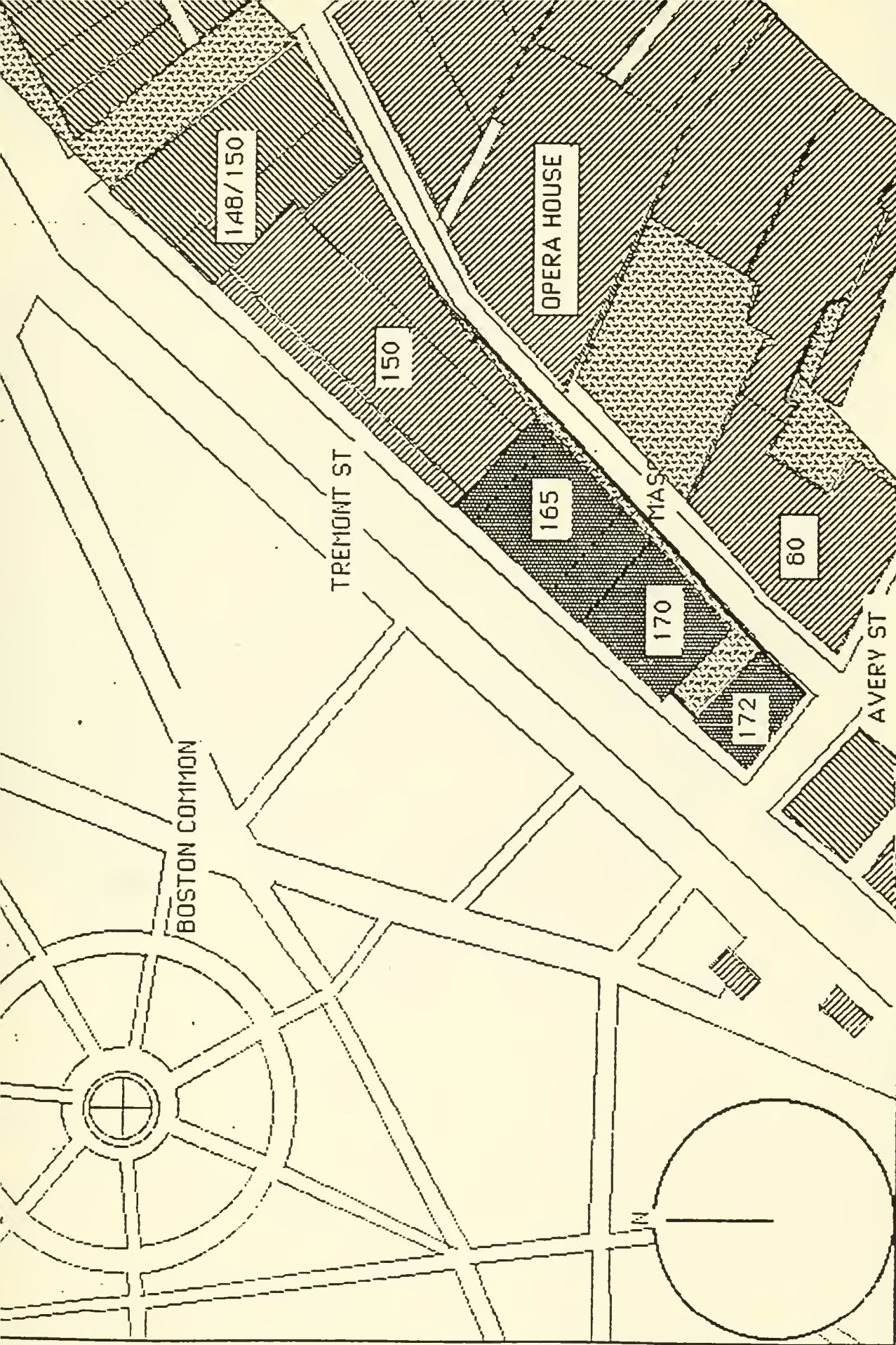
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SHADOW
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DECEMBER 21 12:00 PM

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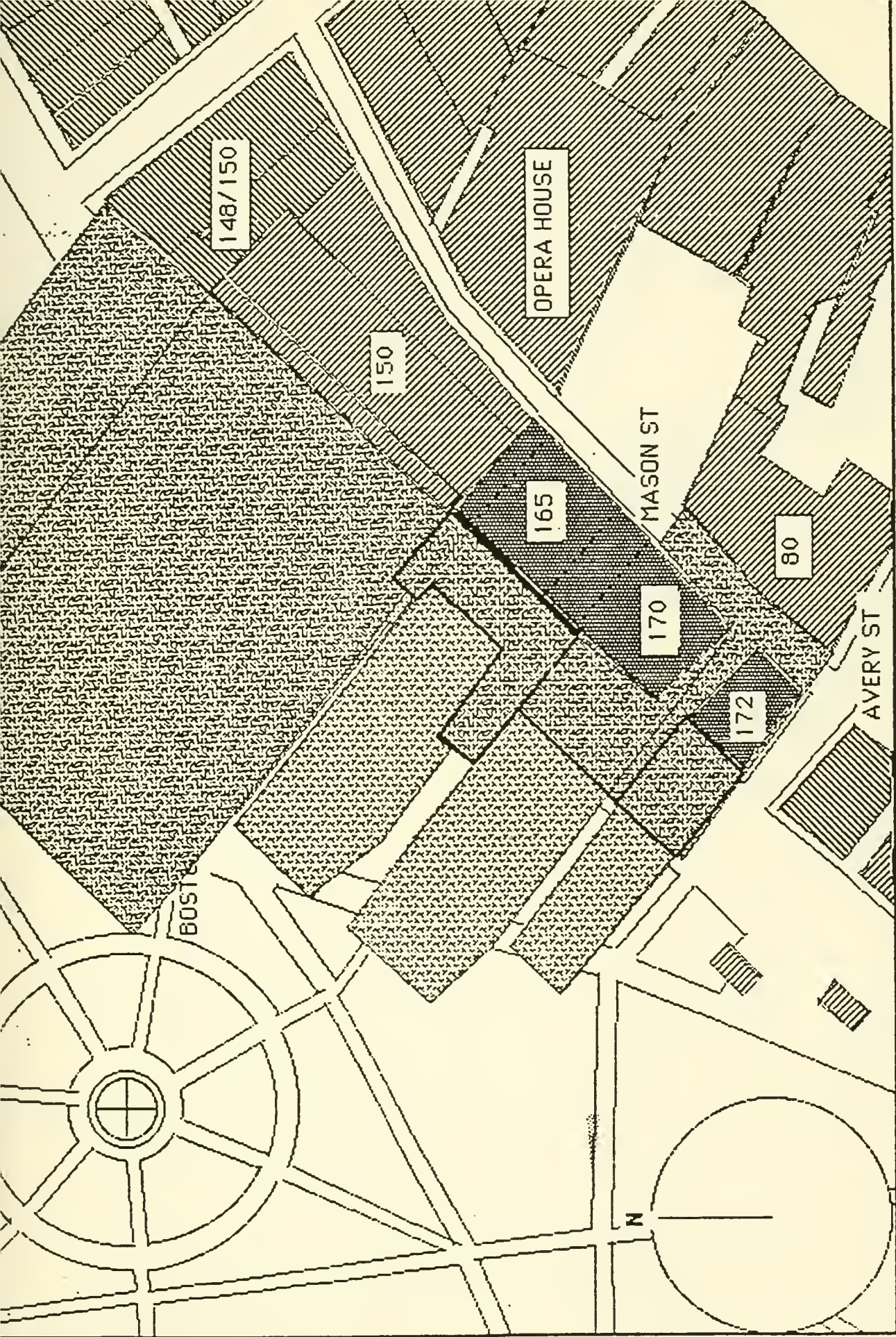
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PARKSIDE

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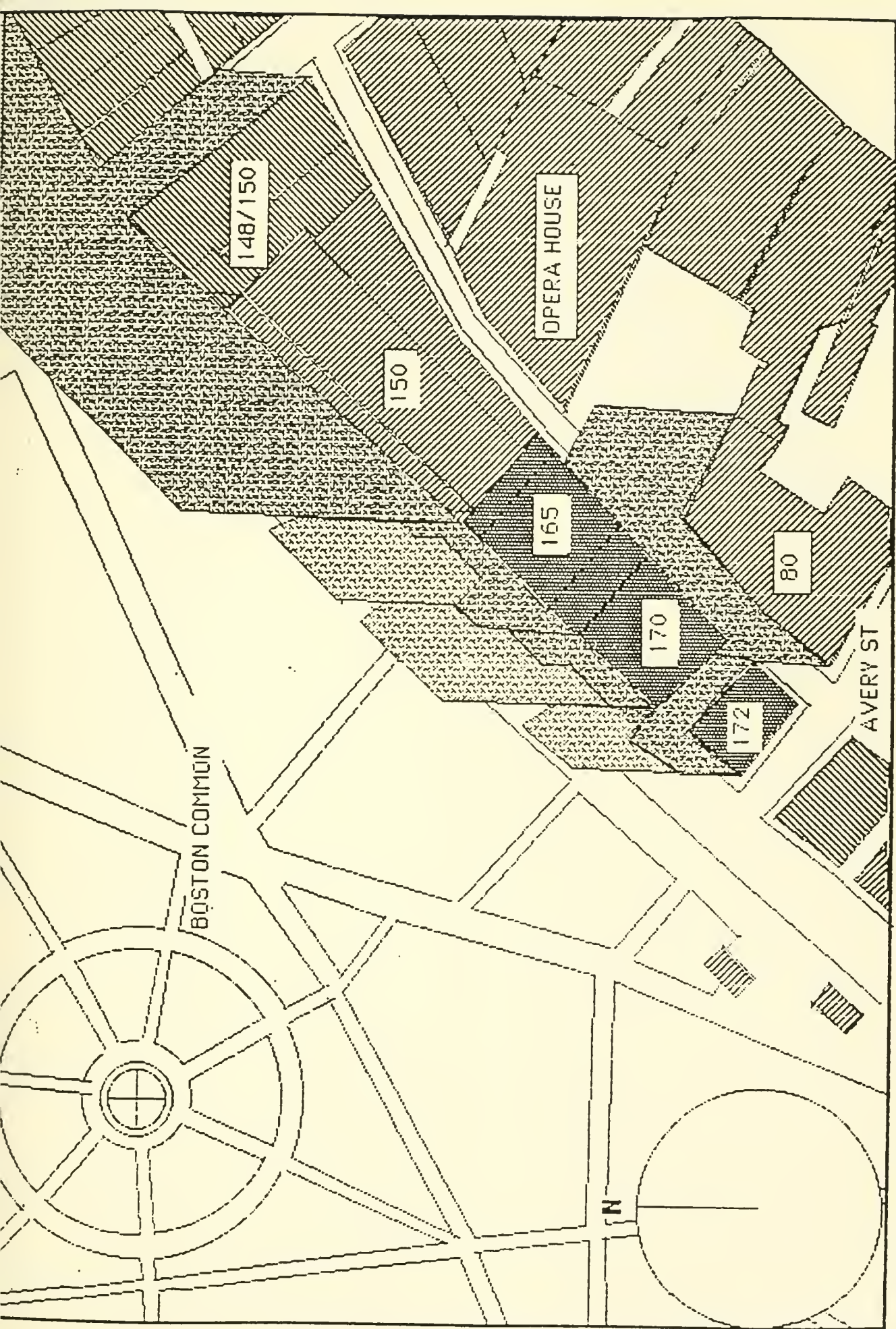
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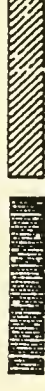


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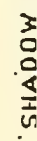
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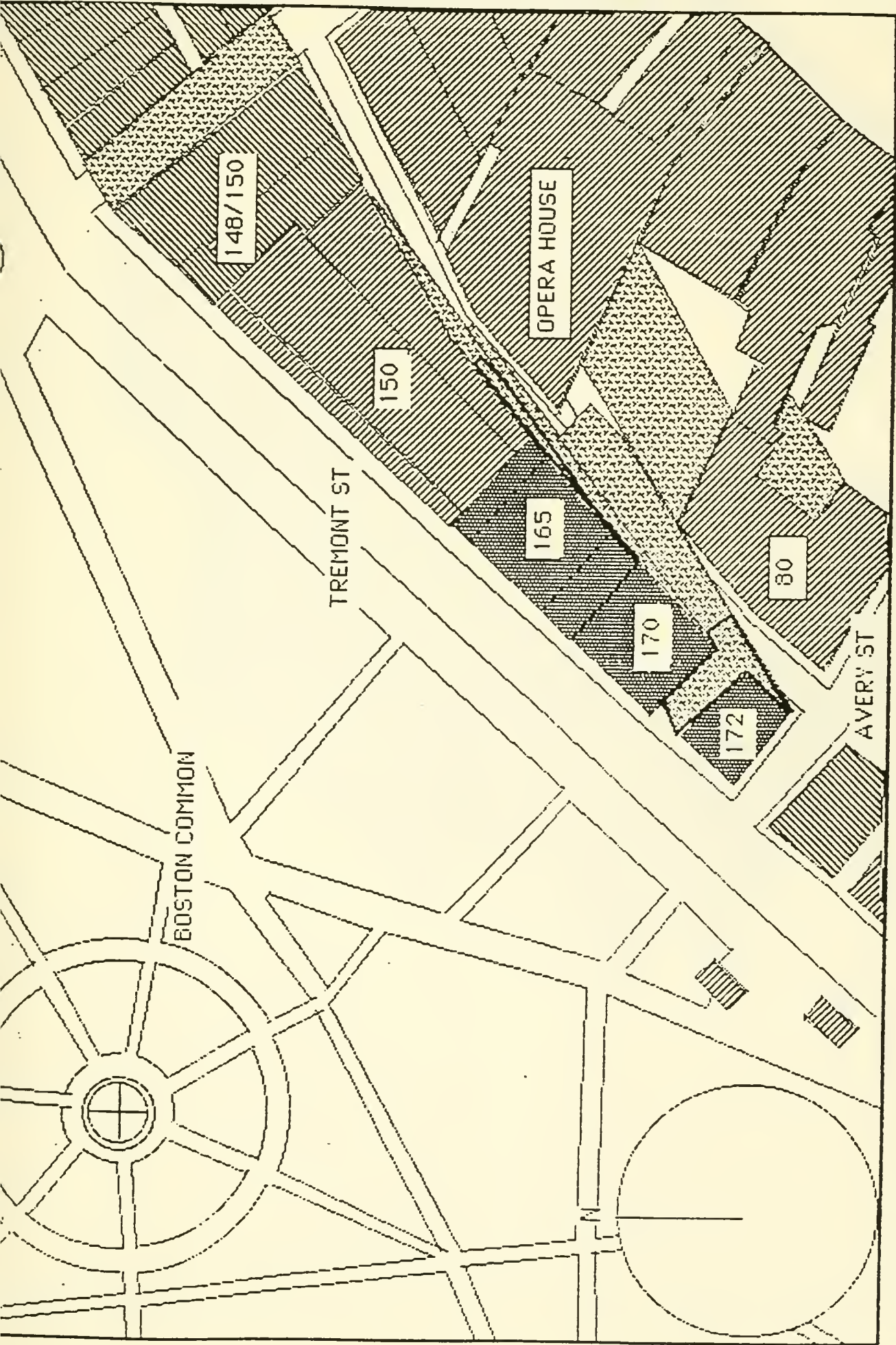
PARKSIDE EXIST OLDG



SHADOW



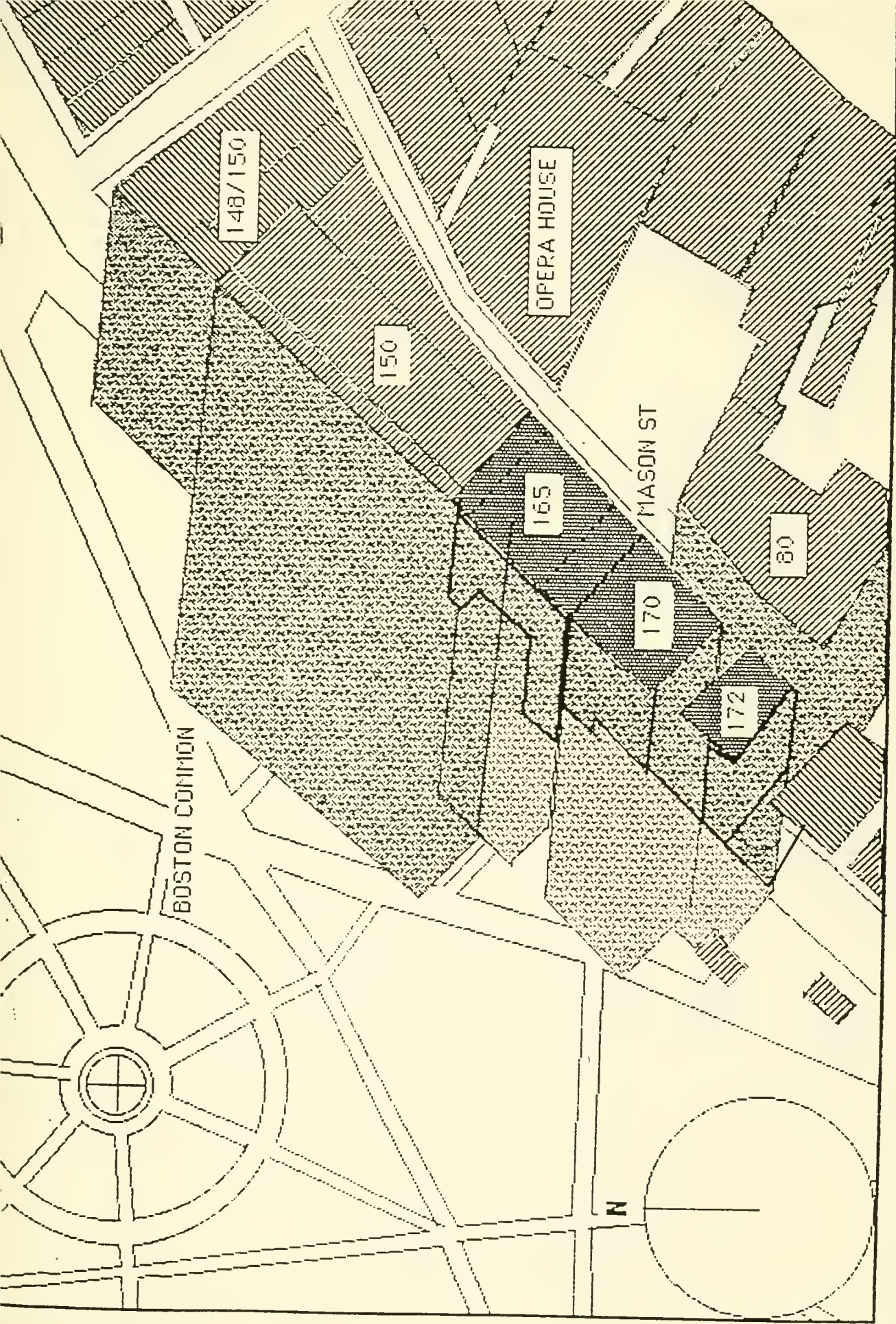
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MARCH 21 3:00 PM

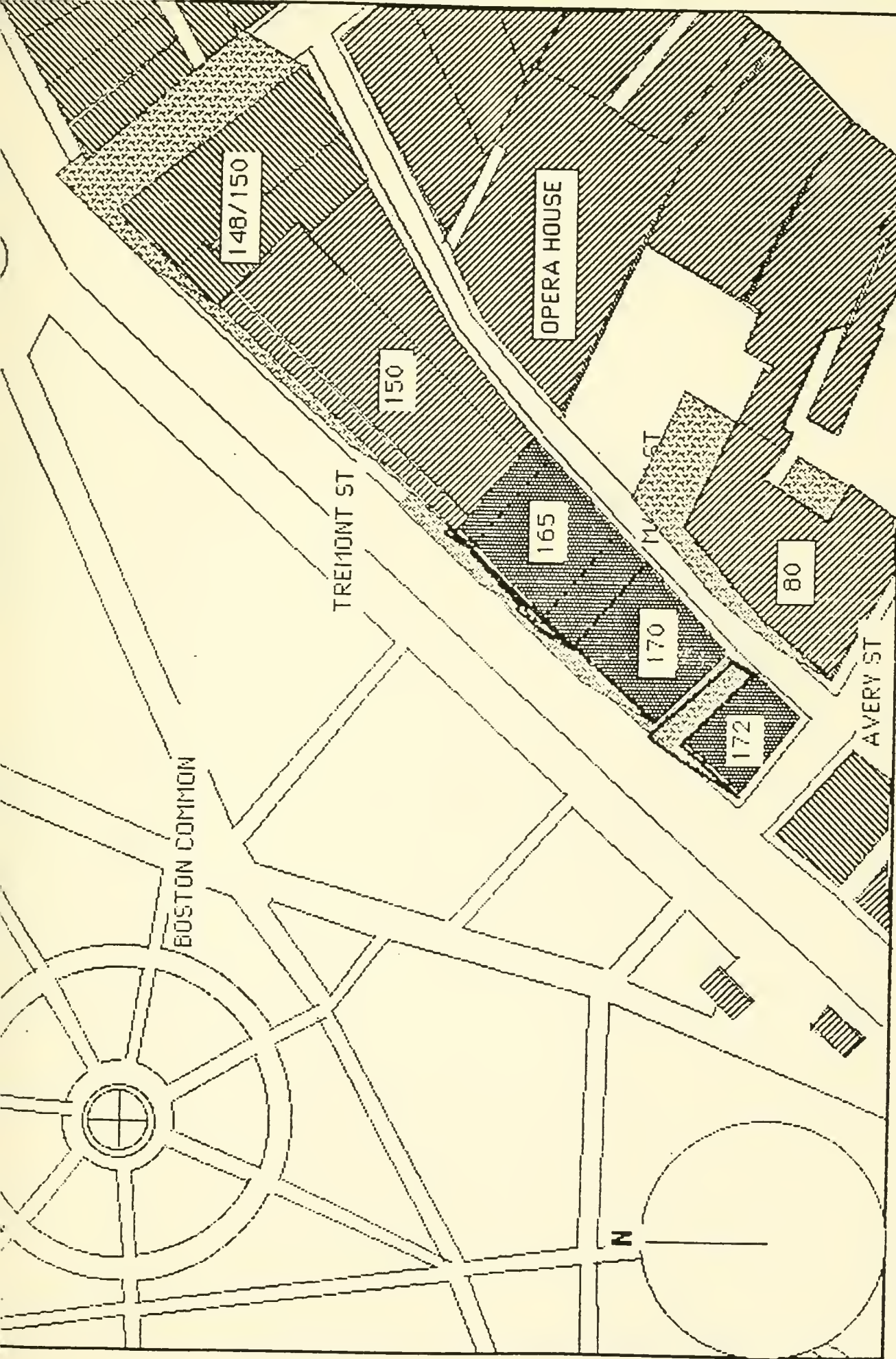
PARKSIDE
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SHADOW





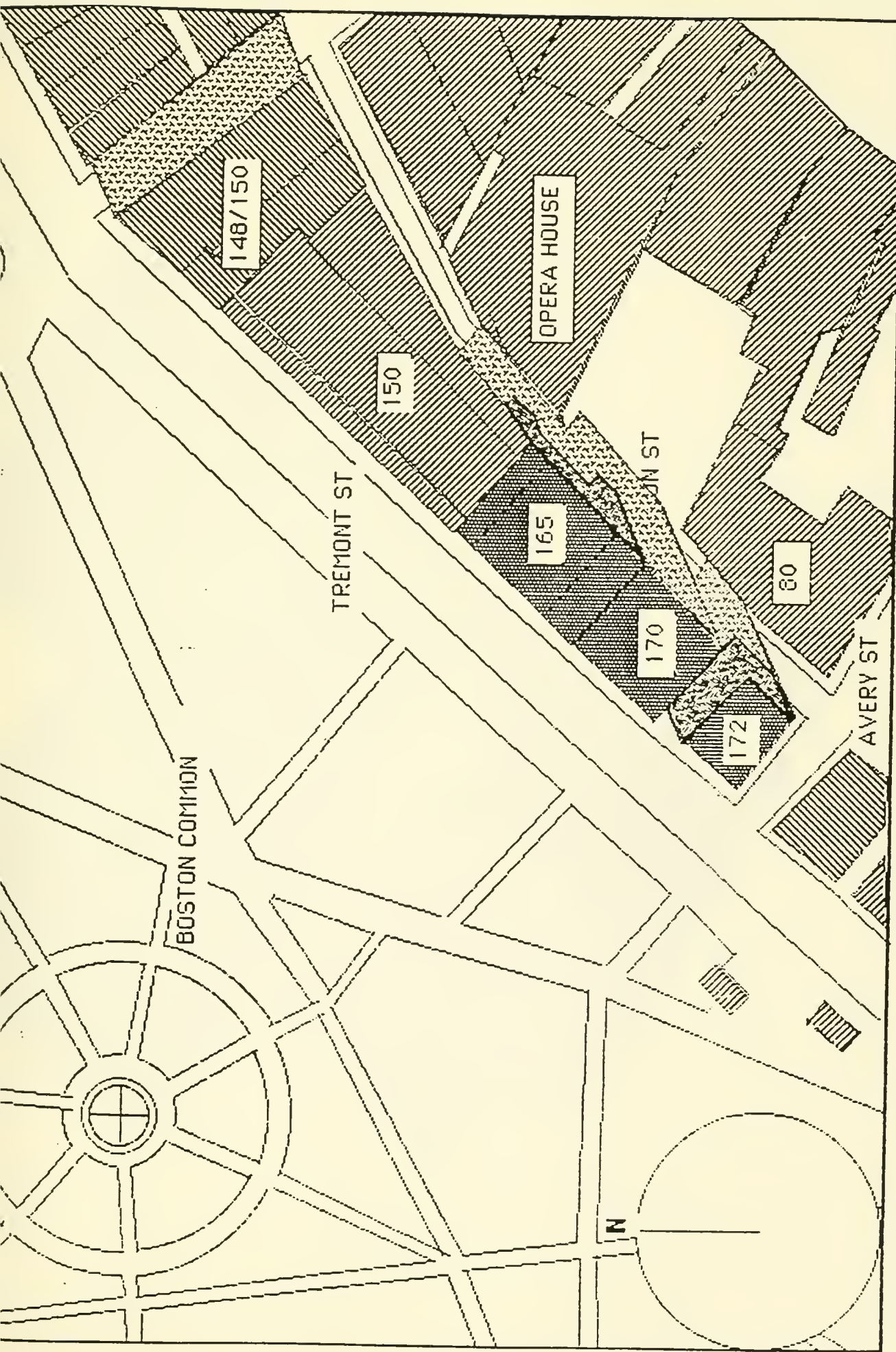
JUNE 21 9:00 AM

PARKSIDE
EXIST RING
SHADOW



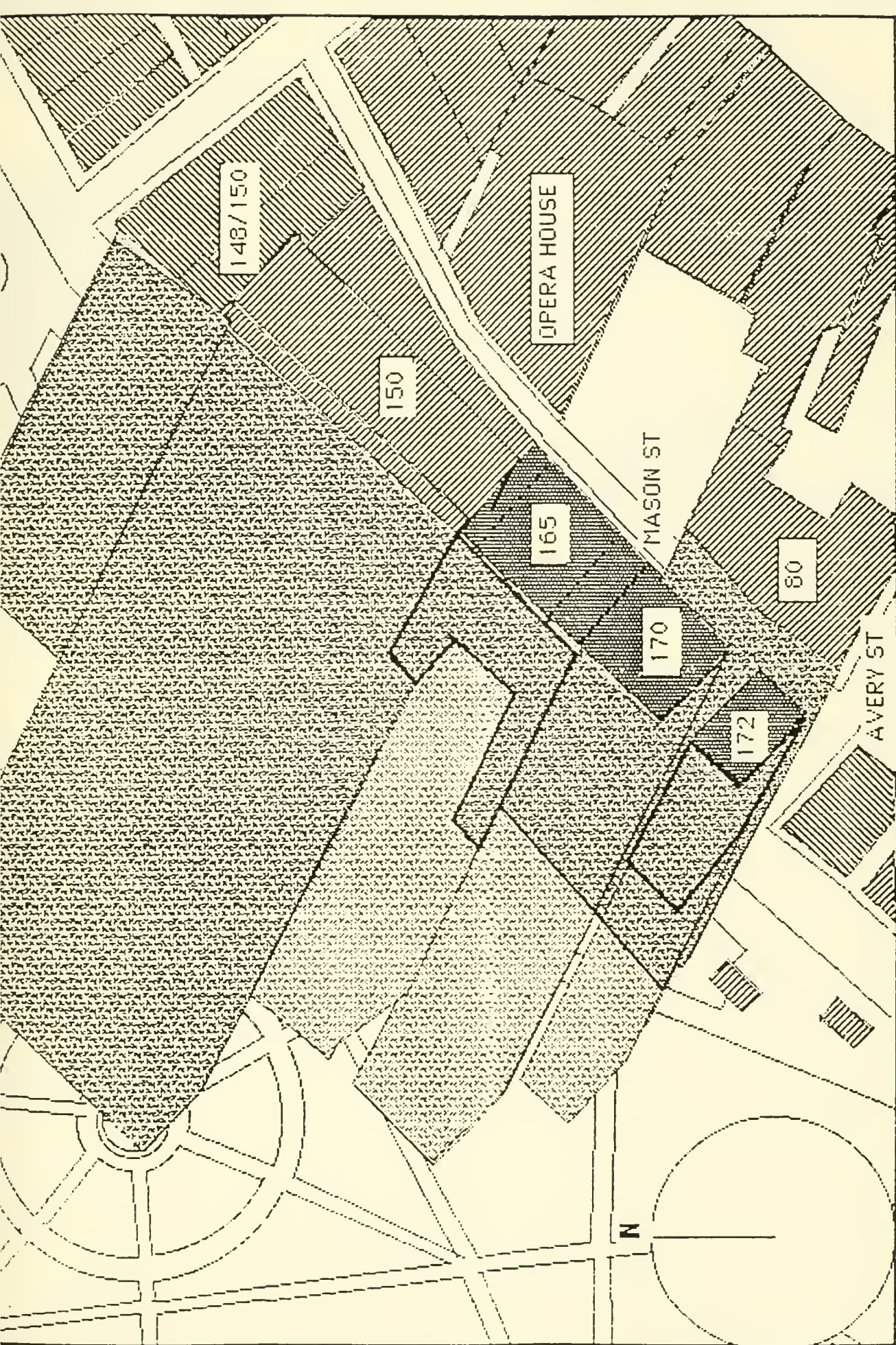
JUNE 21 12:00 PM

PARKSIDE
EXIST BLDG
SHADOW



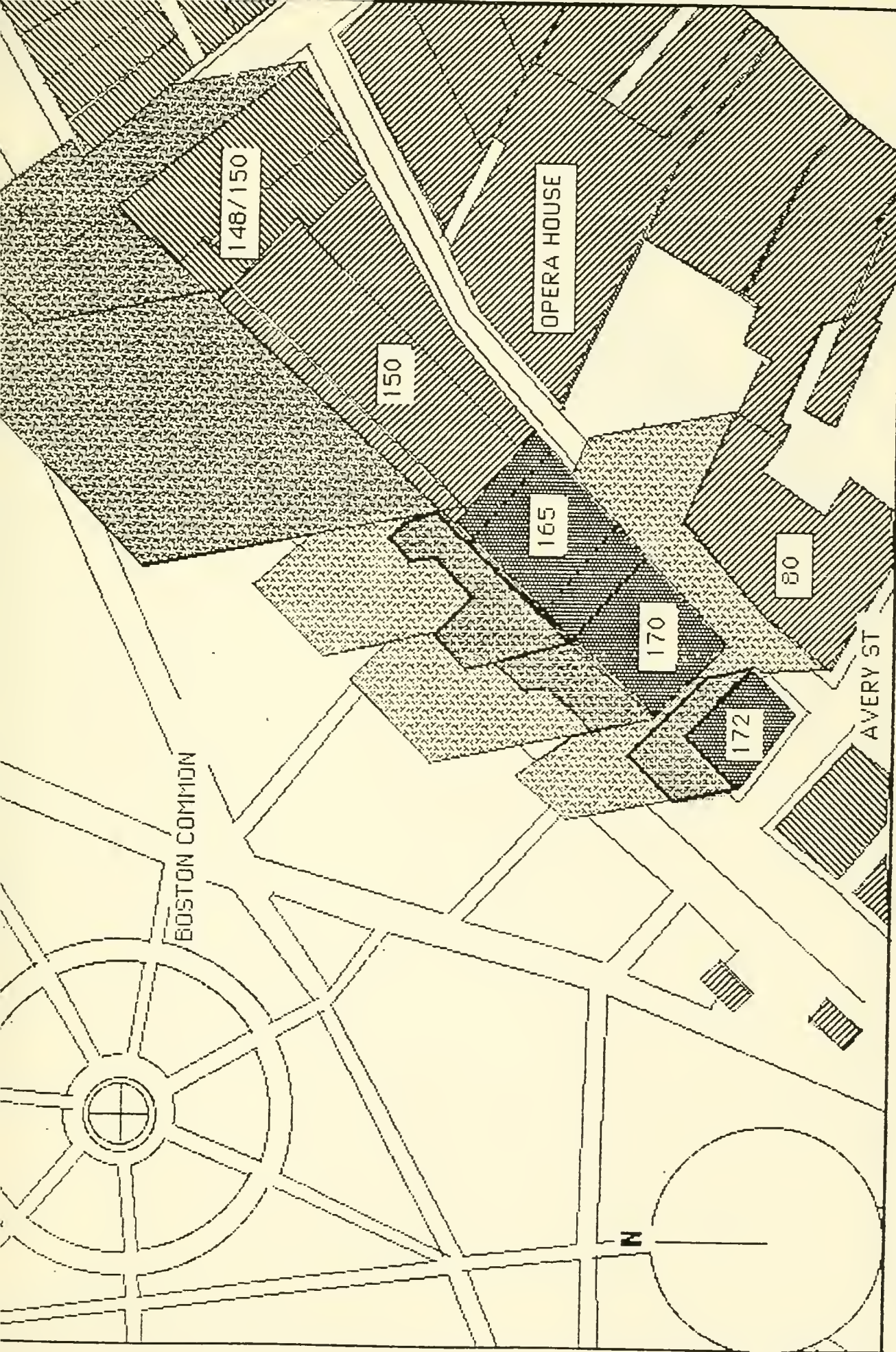
PARKSIDE
EXIST BLDG
SHADOW

JUNE 21 3:00 PM



EXIST OLDG
PARKSIDE
SHADOW

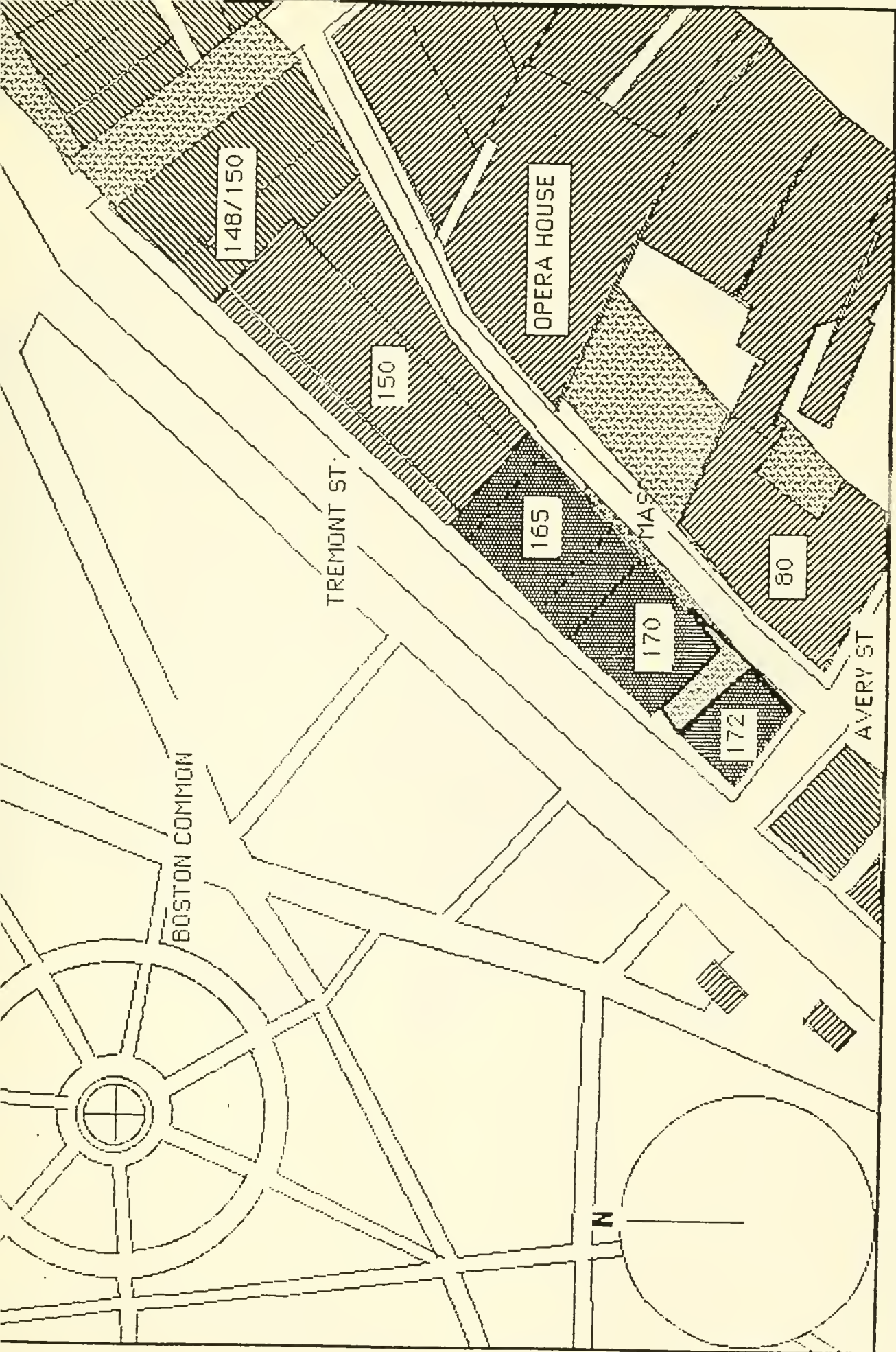
SEPT 21 9:00 AM



SEPT 21 12:00 PM

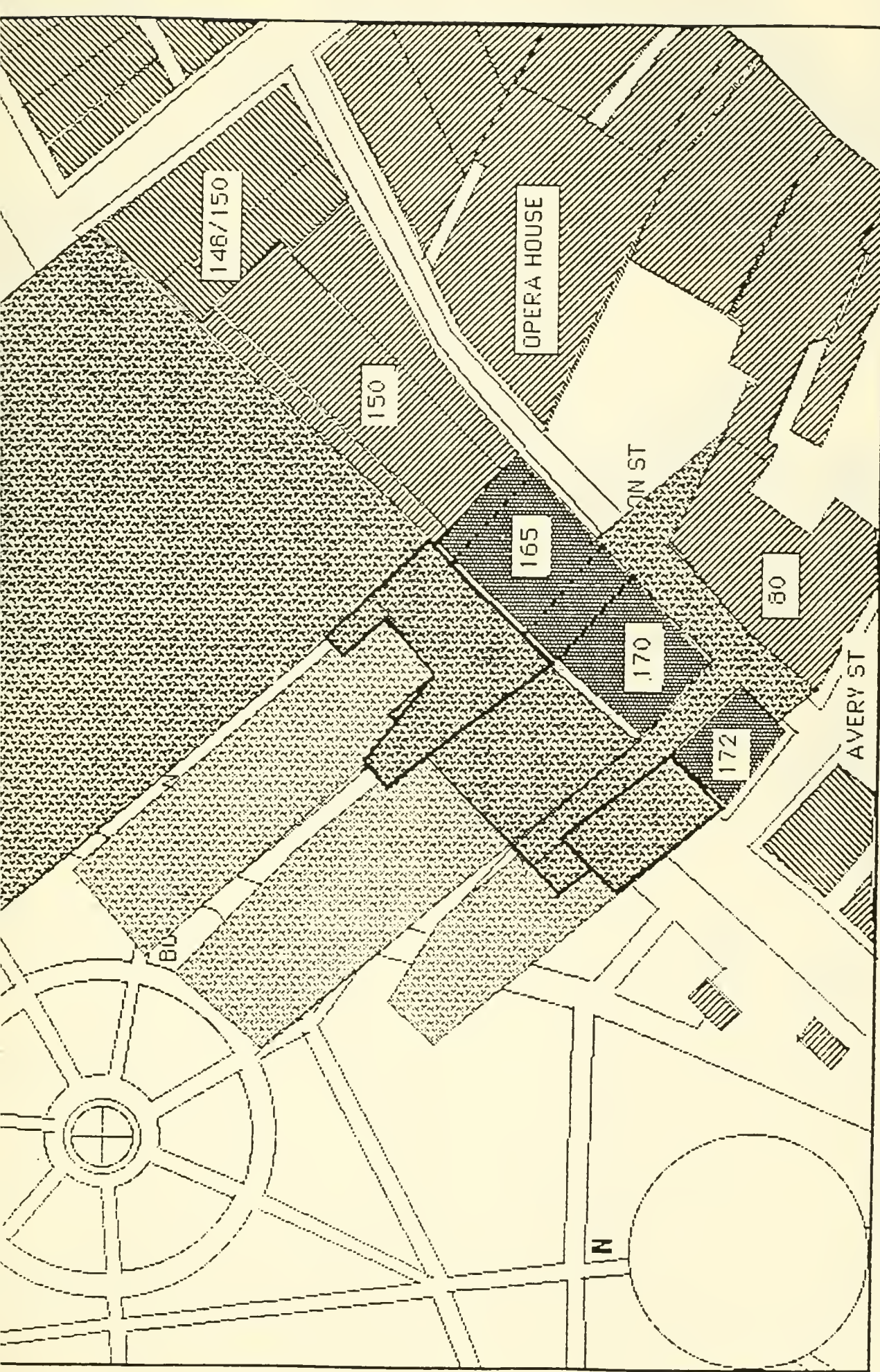
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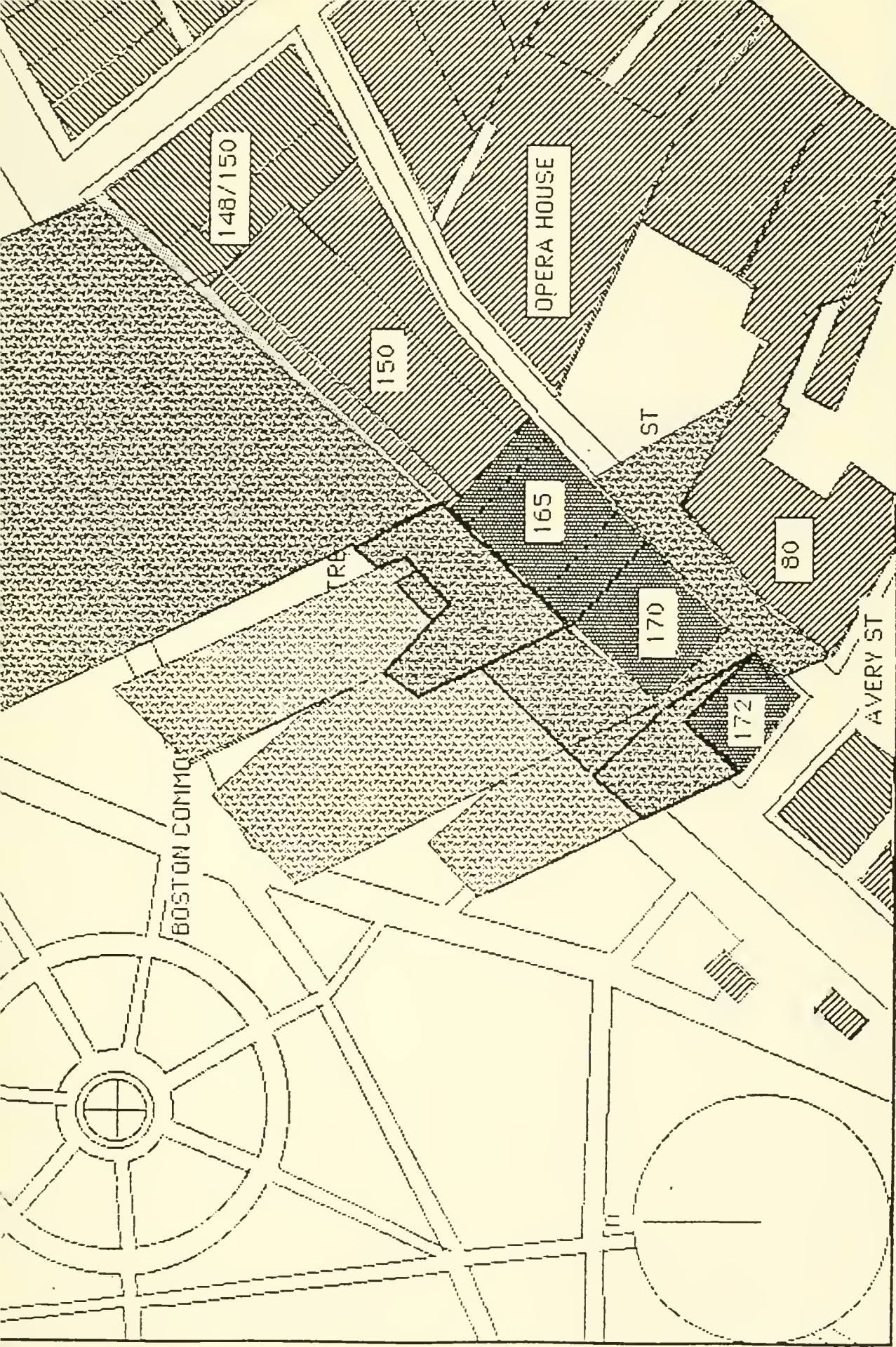
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SHADOW

SEPT 21 3:00 PM



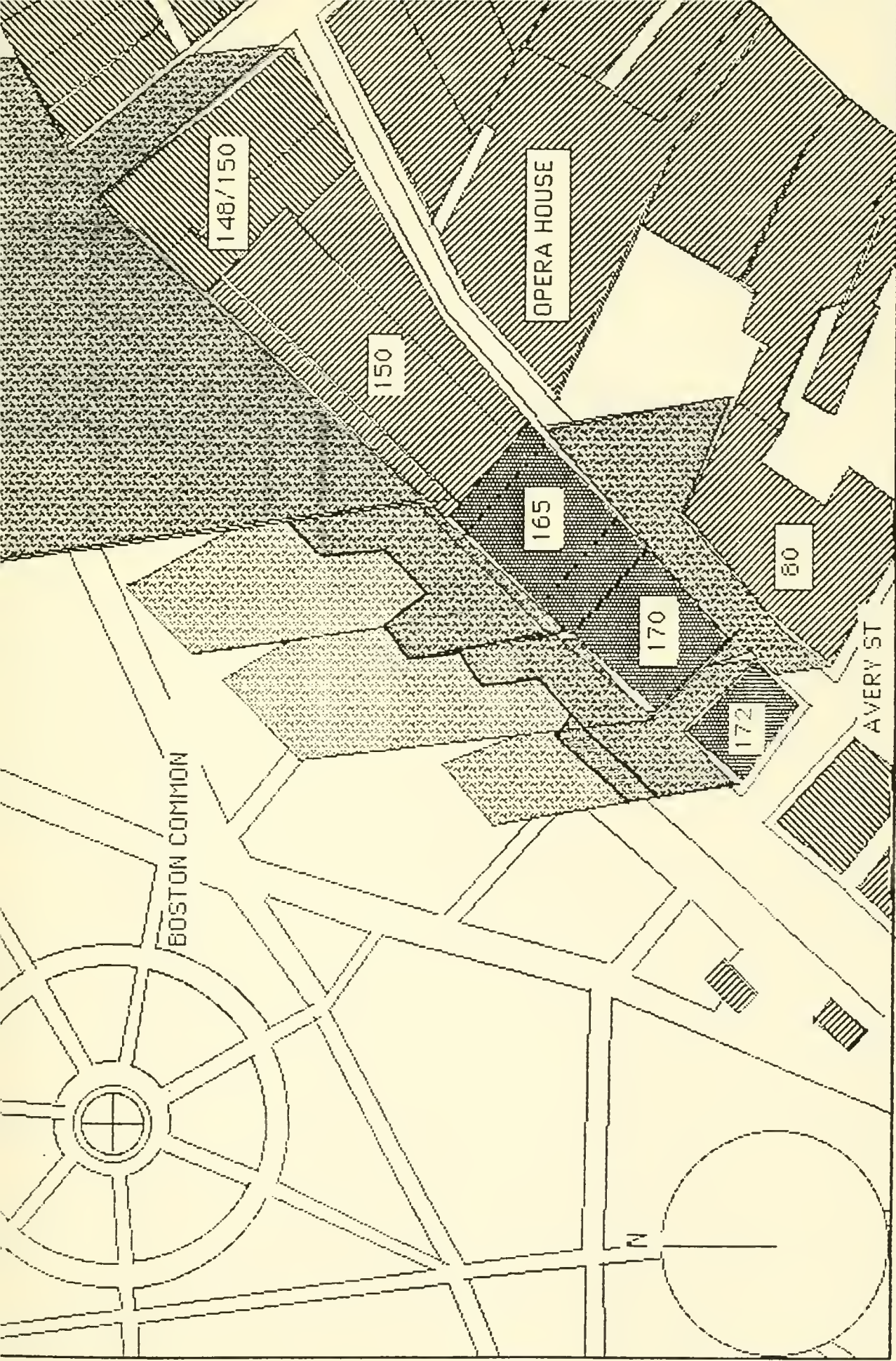
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PARKSIDE
EXIST BLDG
SHADOW



PARKSIDE
EXIST BLDG
SHADOW

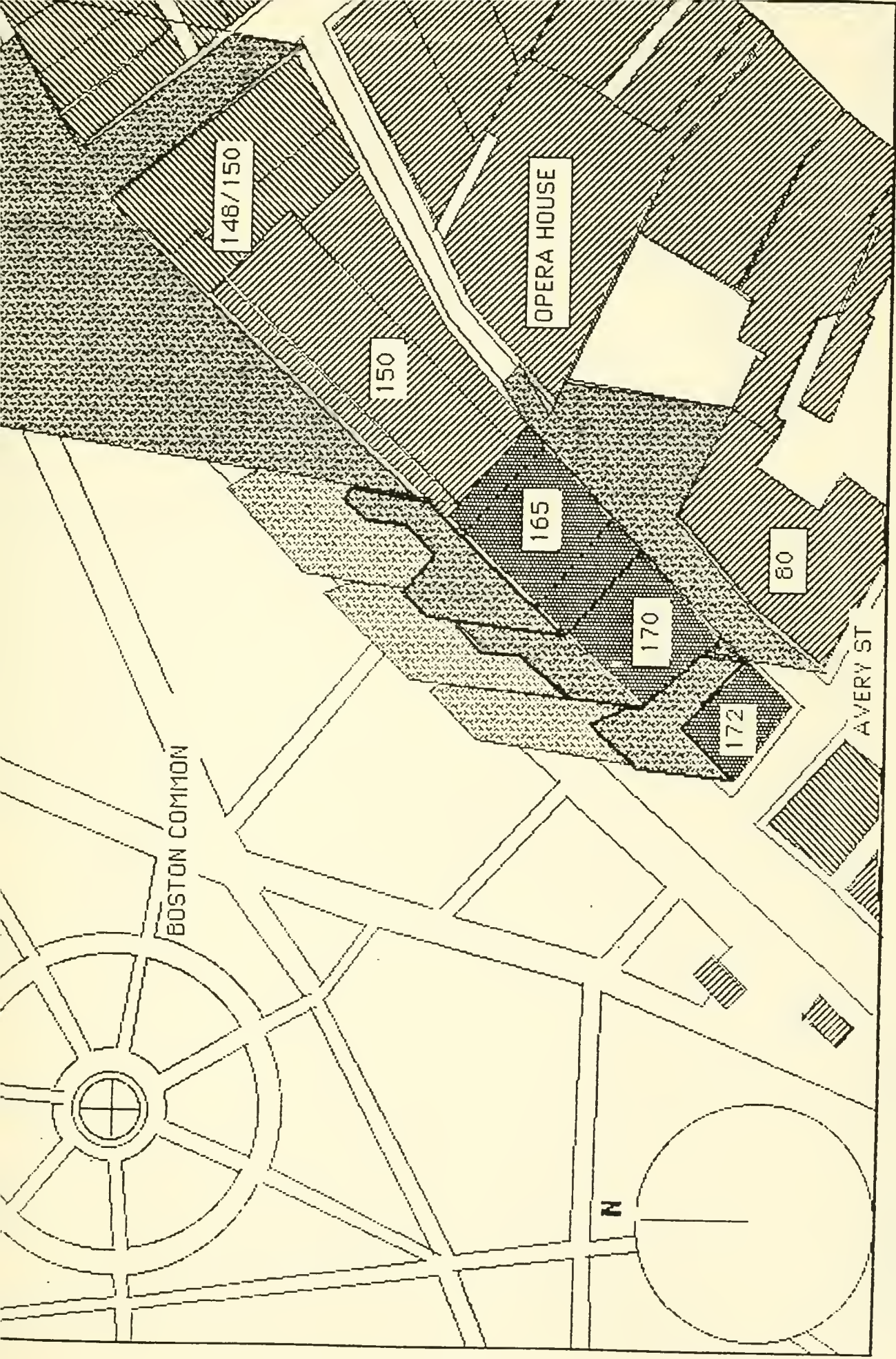
OCTOBER 21 11:00 AM



PARKSIDE
EXIST BLDG
SHADOW

OCTOBER 21 12:00 PM



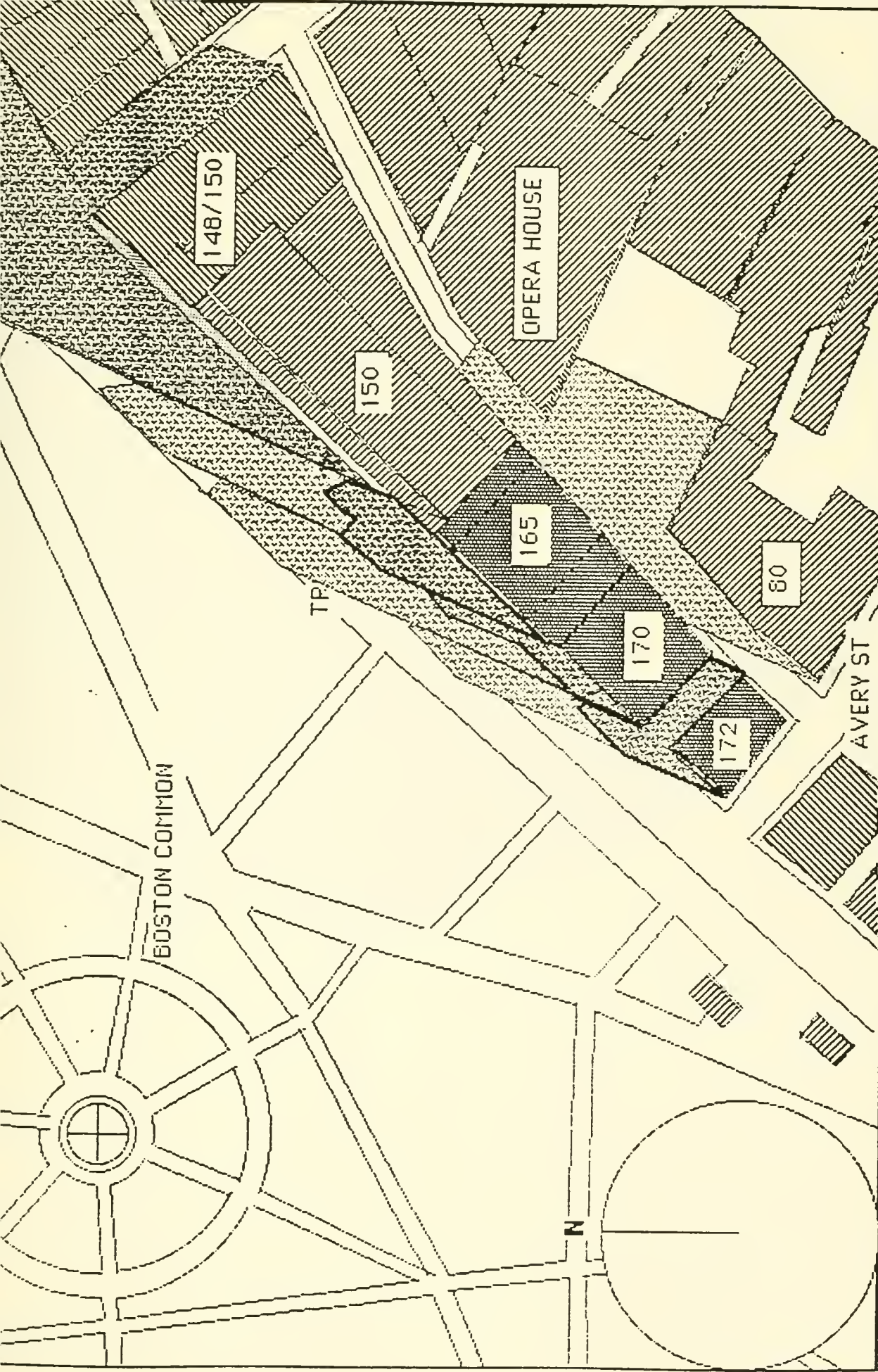


OCTOBER 21 1:00 PM

PARKSIDE

EXIST BLDG

SHADOW

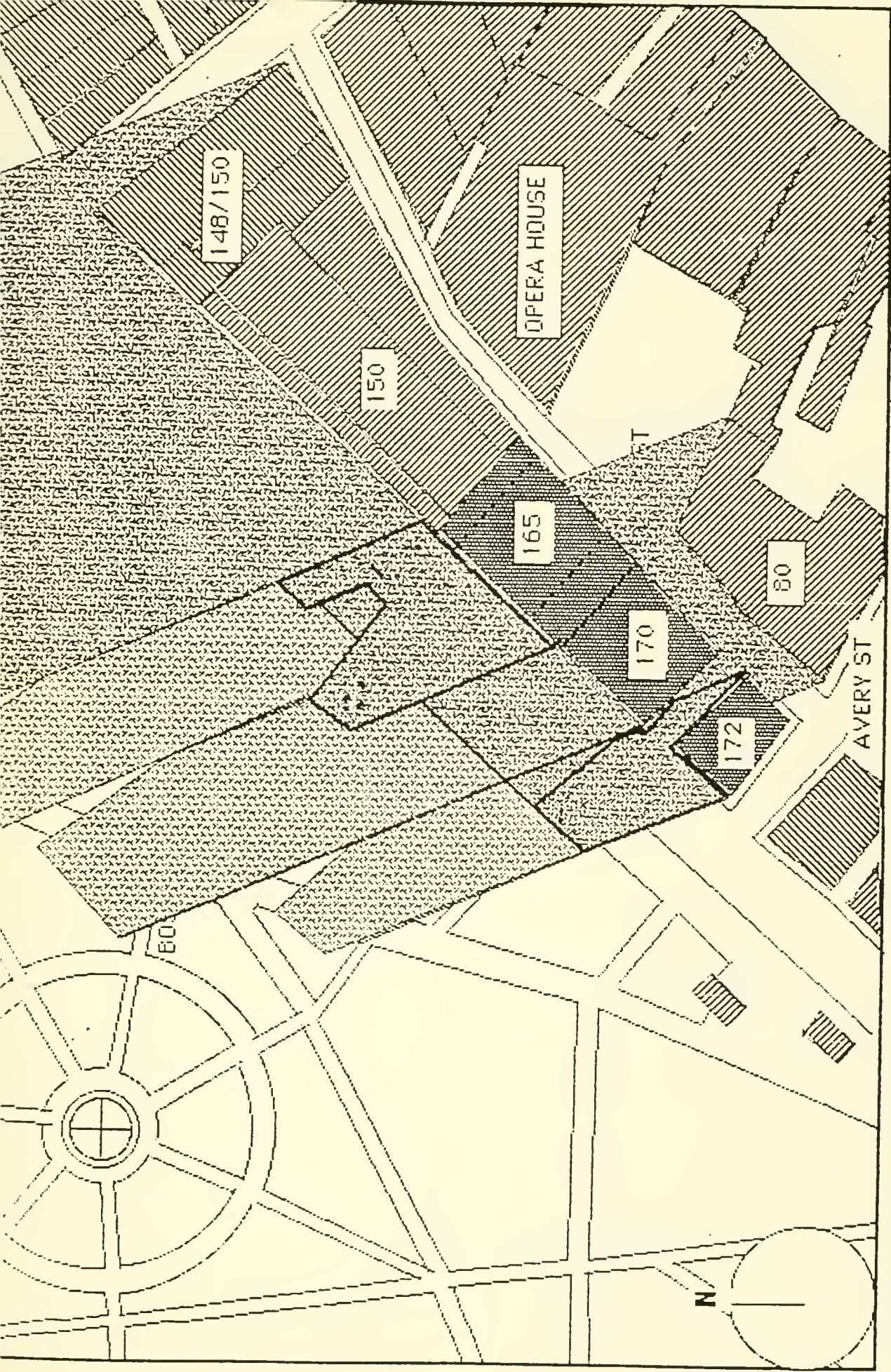


OCTOBER 21 2:00 PM

PARKSIDE

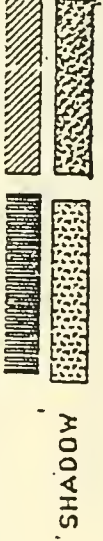
EXIST BLDG

SHADOW

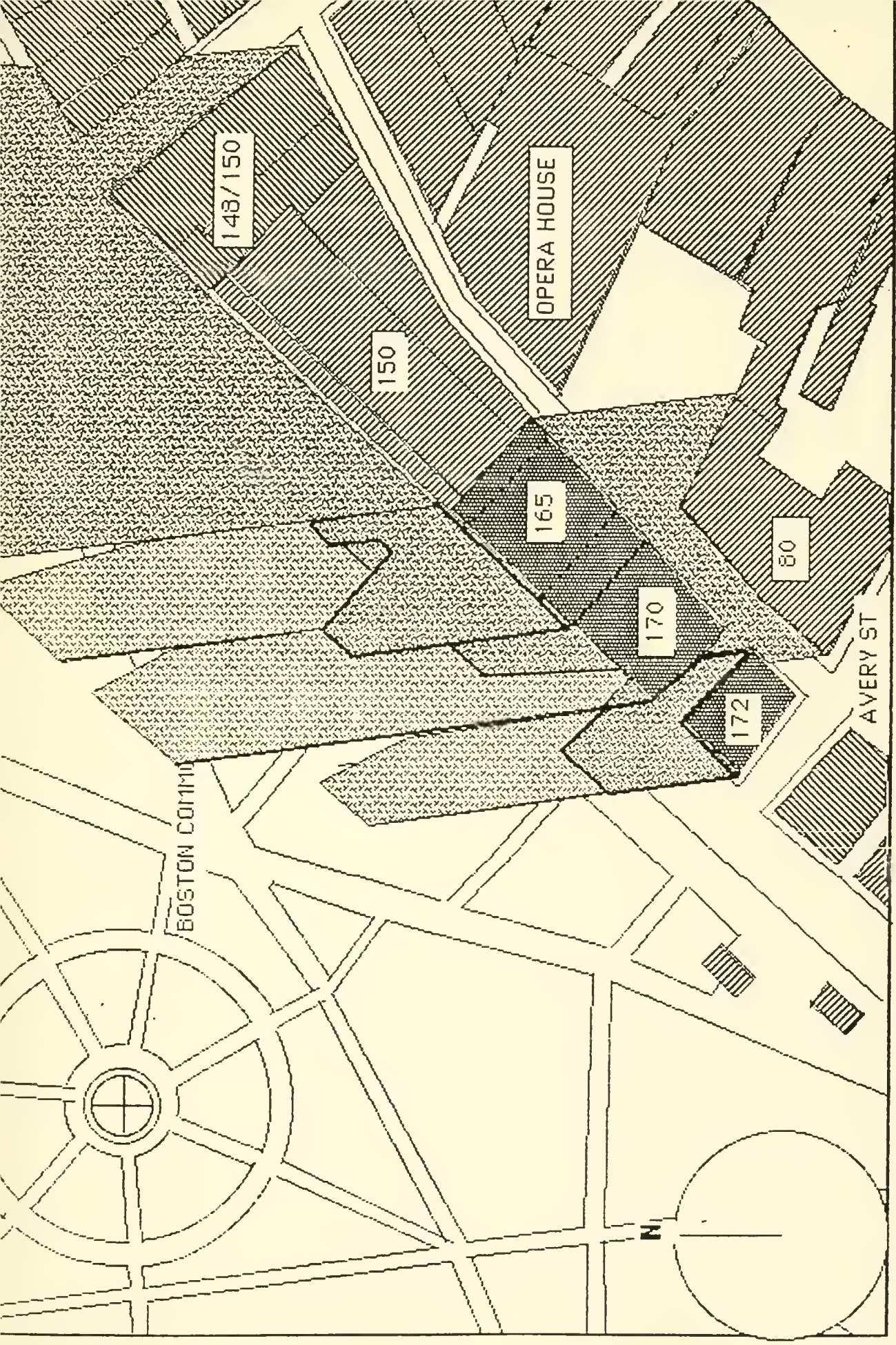


NOVEMBER 21 10:00 AM

PARKSIDE EXIST BLDG

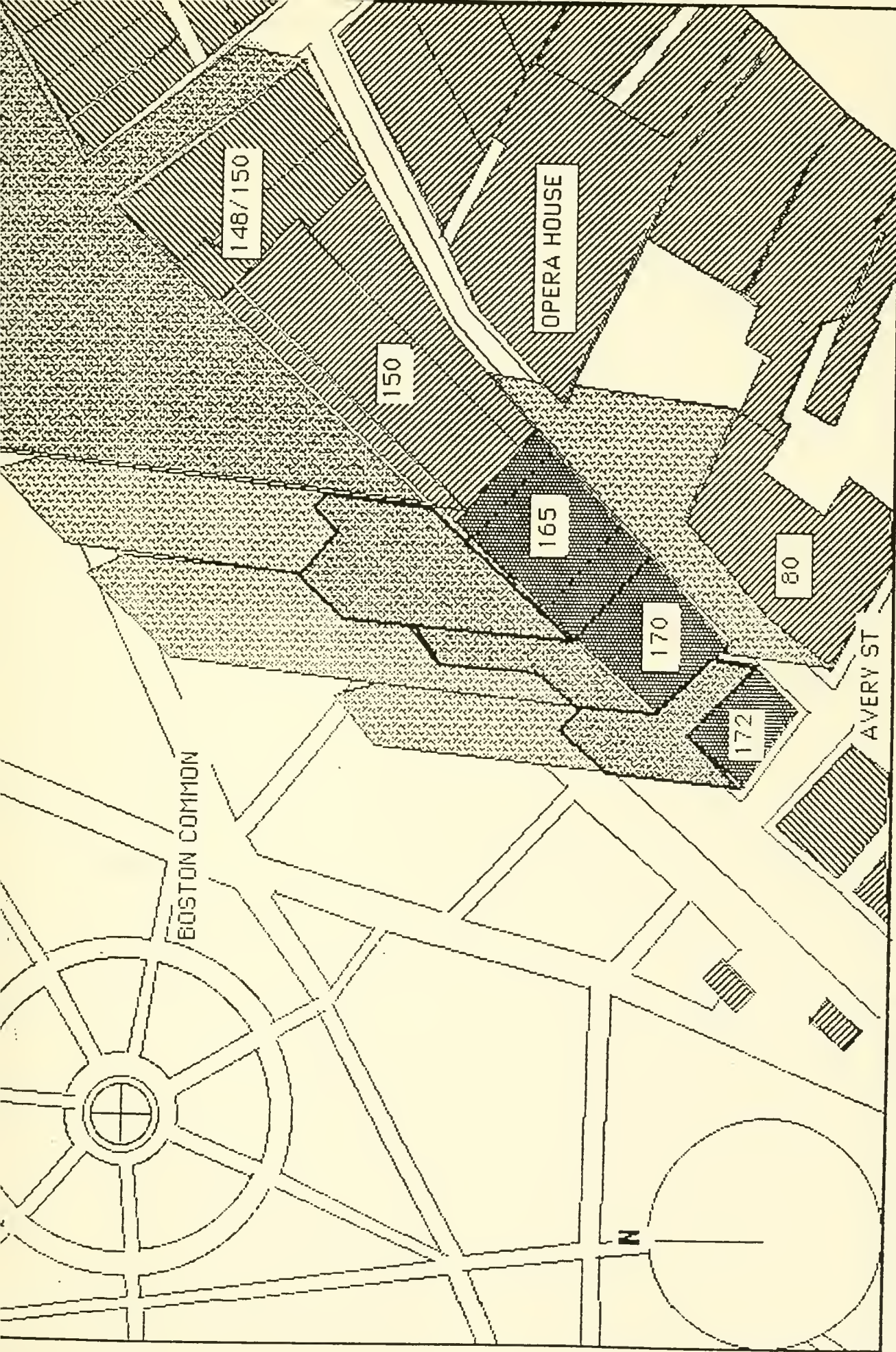




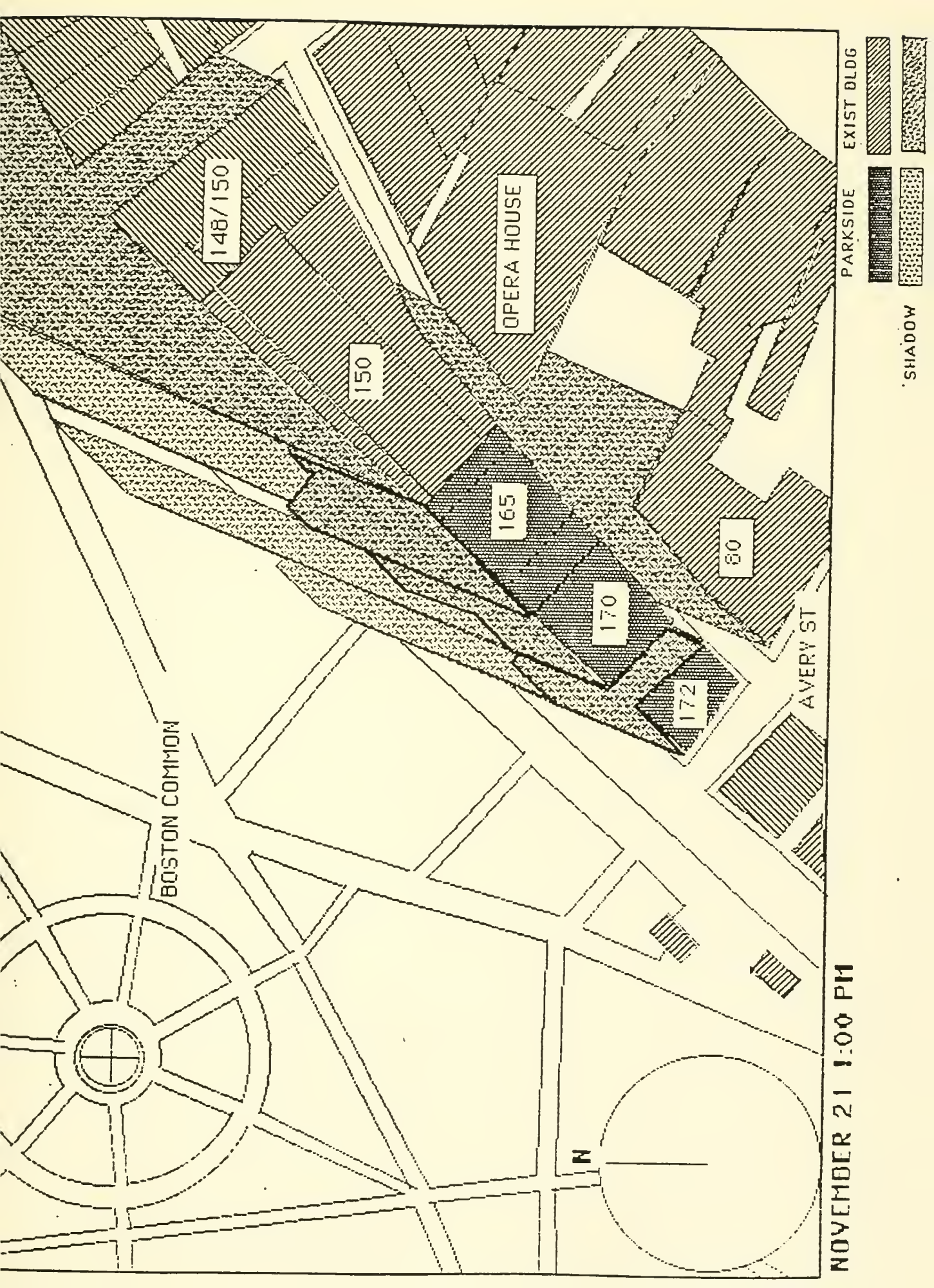


NOVEMBER 21 11:00 AM

PARKSIDE
EXIST BLDG
SHADOW







BOSTON COMMON

148/150

150

OPERA HOUSE

165

170

172

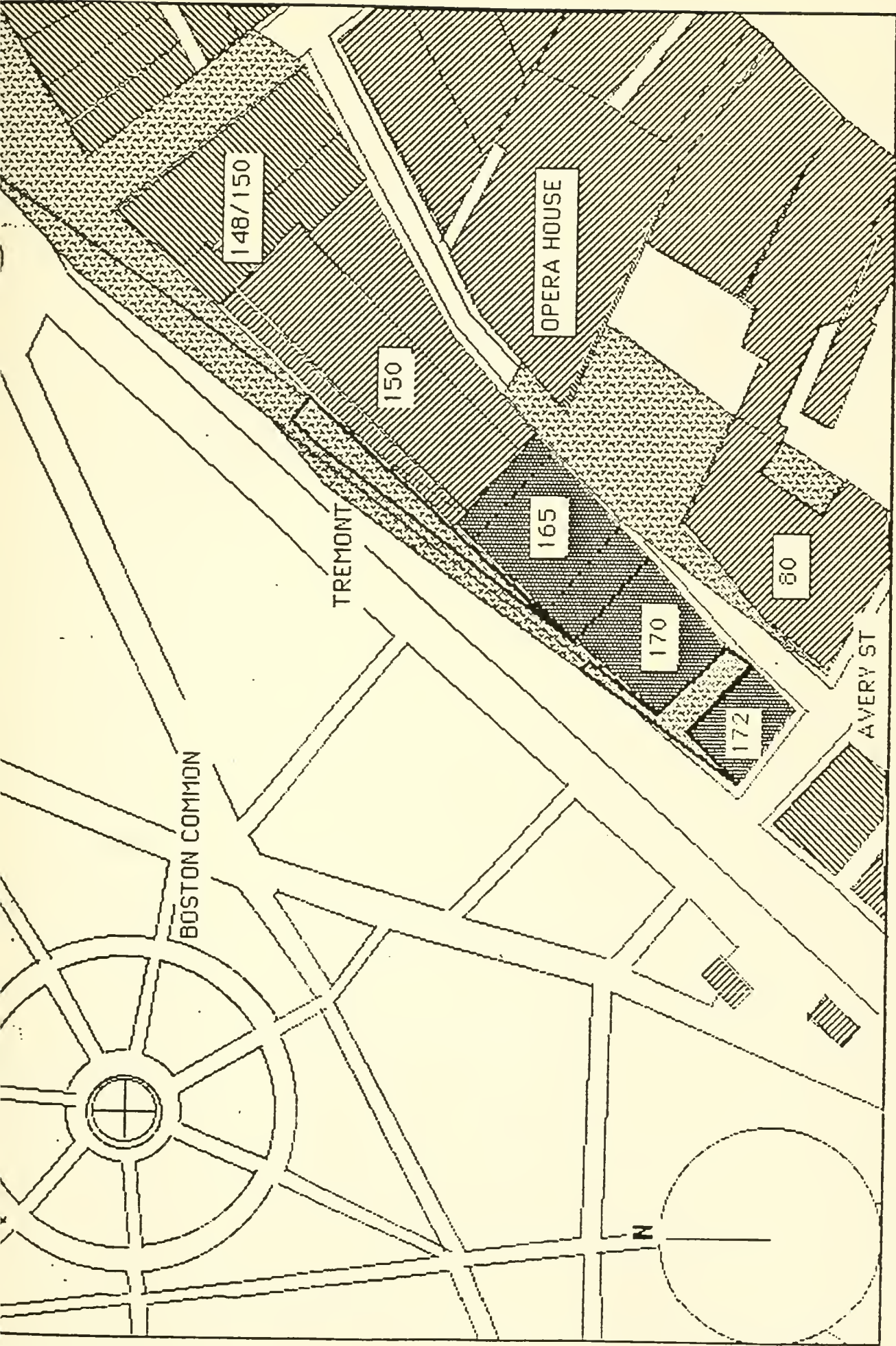
80

AVERY ST

NOVEMBER 21 1:00 PM

PARKSIDE EXIST BLDG

SHADOW



PARKSIDE
EXIST BLDG
SHADOW

NOVEMBER 21 2:00 PM

II. ENVIRONMENTAL PROTECTION COMPONENT

(B) Shadow

While the project will increase shadow on the Common during the morning hours throughout the year, its north-south location on the Common in combination with the east-west movement of the sun limits afternoon shadow only to early-to-mid-afternoon hours from the fall to early spring months. This statement is provided to correct the statement on page 16 of the Draft Project Impact Report (3/14/88).

June 29, 1988

Susan N. Price
Hall Davison & Company
20 University Road
Cambridge, MA 02138

RE: 165 and 172 Tremont Street
Boston, Massachusetts

Enclosed is a matrix titled "Material Impact of Shadow on the Plant Life of Boston Common for 165 and 172 Tremont". The purpose behind creating this matrix was to assess what the potential impact of the shadows cast by the new buildings at 165 and 172 Tremont might be on the plant materials on the Boston Common. The assessment was done by first noting what species fall within the changing areas of shadow, then analyzing how much less direct sunlight specific specie groups would receive, and lastly by commenting on what the potential effects might be. Note that this summary does not assess the impact on specific trees; rather it focuses on specie groups which fall into the changing areas of shadow.

The results of the assessment are as follows:

From October to April the longer shadows will have no impact on the plant materials.

From May 1st to October 1st when the plant materials are producing food, the decrease in the amount of direct sunlight received may reduce food production capability. Over time the Elms and the Lindens may respond by becoming more open.

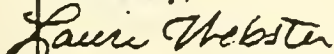
The reduced amount of direct sunlight may reduce the flowering and fruiting potential of the crabapples.

All three types of turf identified tolerate varying degrees of shade. Different percentages of the listed turf were identified in different samples taken. The relative percentages of turf in a given area may change in response to the changing areas of shade, or in other words the type of turf most tolerant to the new conditions may become more predominant.

All the plants in question will receive only about 3 hours less direct sunlight per day and in most cases the amount of direct sun received per day will not fall below 5-6 hours. The impacts are judged to be minimal; there is no threat to the survival of any of the plant materials.

All of the trees listed, the Tilia species (Lindens), the Malus species (Crabapples), Sophora japonica (Pagoda Tree) and the Ulmus species (Elms) are among the best suited to withstand city conditions (poor soils, insufficient light, insufficient water, excessive smoke and dust and gas fumes in the air). Testimony to how well these particular species do in the city are those specimens of the same species which flourish in the shadow of existing buildings on this side of the Common.

Sincerely,



Lauri Webster
Vice President

"MATERIAL IMPACT OF SHADOW ON THE PLANT LIFE ON BOSTON COMMON FOR 165 AND 172 TREMONT STREET".

Month	Time of Day	Plant Materials in existing shadow	Plant Materials in new shadow	Analysis
March	9:00 am	Common Lindens Crabapples English Elms Yews	-----> -----> -----> -----> Additional Common Lindens Additional English Elms Jersey Elms Holland Elms Lawn: Kentucky Bluegrass Perennial Ryegrass (negligible) Annual Bluegrass	All listed deciduous plant materials are dormant at this time of the year. The evergreen shrubs (Yews) tolerate partial shade.
	12:00 noon	No plant materials in shade	Common Lindens Crabapples Lawn (very small area)	The types of turf identified all tolerate varying degrees of shade.
	3:00 pm	No plant materials in shade	No plant materials in shade	No impact.

Month	Time of Day	Plant Materials in existing shadow	Plant Materials in new shadow	Analysis
December	9:00 am	Common Linden Crabapples Yews English Elms Holland Elms Scotch Elms Jersey Elms Pagoda Trees Lawn: Kentucky Bluegrass Perennial Ryegrass (negligible) Annual Bluegrass	-----> -----> -----> -----> -----> -----> -----> -----> -----> Additional English Elms Holland Elms Scotch Elms Jersey Elms Lawn: Kentucky Bluegrass Perennial Ryegrass (negligible) Annual Bluegrass	All listed deciduous plant materials are dormant this time of year. Evergreen shrubs (Yews) tolerate shade. Turf is semi-dormant during winter months.
	12:00 noon	Common Linden Crabapples Yews Lawn: Kentucky Bluegrass Perennial Ryegrass (negligible) Annual Bluegrass	-----> -----> -----> Additional Common Linden English Elms Jersey Elms Lawn: Kentucky Bluegrass Perennial Ryegrass (negligible) Annual Bluegrass	No impact.
	3:00 pm	No plant materials in shade	No plant materials in shade	

References:

- o "Schematic Design Submission" for 165 and 172 Tremont, Shadow Studies.
- o "Trees for American Gardens," by Donald Wyman
- o Gary Koller, Managing Horticulturalist for the Arnold Arboretum (telephone conversation 6/30/88)
- o "Turfgrass: Science and Culture," by James Beard



<u>Month</u>	<u>Time of Day</u>	<u>Plant Materials in existing shadow</u>	<u>Plant Materials in new shadow</u>	<u>Analysis</u>
September	9:00 am	Common Lindens Crabapples English Elms Lawn: Kentucky Bluegrass Perennial Ryegrass (negligible) Annual Bluegrass	-----> -----> -----> Additional Common Lindens Additional English Elms Jersey Elms Holland Elms Scotch Elms Pagoda Trees Lawn: Kentucky Bluegrass Perennial Ryegrass (negligible) Annual Bluegrass	Listed plant materials receive approximately 3 hours less direct sunlight per day; only Lindens, Crabapples and Yews receive less than 6 hours of sun per day.
	12:00 noon	No plant materials in shade	Common Lindens Crabapples Yews Lawn: Kentucky Bluegrass Perennial Ryegrass(negligible) Annual Bluegrass	The decrease in sun will reduce food production capability. Over time the large deciduous trees may respond by becoming more open. The flowering and fruiting potential of the crabapples may be reduced.
	3:00 pm	No plant materials in shade	No plant materials in shade	Minimal impact.

Month	Time of Day	Plant Materials in existing shadow	Plant Materials in new shadow	Analysis
June	9:00 am	Common Lindens Crabapples English Elms Yews Seasonal Flowers	-----> -----> -----> -----> -----> Additional Common Lindens Additional English Elms Jersey Elms Lawn: Kentucky Bluegrass Perennial Ryegrass (negligible) Annual Bluegrass	Listed plant materials receive approximately 3 hours less direct sunlight per day; however by noon all plant material is in full sun.
	12:00 noon	No plant materials in shade	No plant materials in shade	From May 1st to October 1st trees are producing food. The decrease in direct sun will reduce food production capability although not significantly. Over time the large deciduous trees may respond by becoming more open. The flowering and fruiting potential of the crabapples may be reduced.
	3:00 pm	No plant materials in shade	No plant materials in shade	The types of turt identified all tolerate varying degrees of shade.
				Minimal Impact.

Exhibit C

D. 110111

TECHNOLOGY
INTEGRATION:
AND 1
DEVELOPMENT
GROUP 1
INCORPORATED

One Progress Road
Billerica, MA 01821
Telephone (617) 667-3779

13 July 1988

Hall, Davison & Company
20 University Road
Cambridge, MA 02138

Attention: Ms. Susan Price

Subject: Noise Impact of Rooftop Mechanical Rooms
165 Tremont Street on Tremont-on-the Common

Dear Susan:

This letter communicates the findings of our noise analysis of the impact of rooftop mechanical equipment on the residential areas of Tremont-on-the-Common (TOC).

We have analyzed the impact of a Baltimore Aircoil (BAC) Series V cooling unit Model F1642-P as the leading candidate for the rooftop cooling unit at Parkside East. Attachment A shows that this unit will be located approximately 50 feet from the southwest wall of TOC. Noise data supplied by the manufacturer are shown in Attachment B. The criteria for the interior noise levels in living spaces are shown in Attachment C (from Beranek Noise and Vibration Control, McGraw Hill, 1971). These range from PNC 25 to 40. We have not evaluated the background noise at TOC or within any TOC residence, so we do not know whether or not the recommended criteria are even being met under existing conditions.

The manufacturer's noise data have been extrapolated to the nearest point on the TOC building, and approximate noise reduction of the building walls calculated. We assumed that the southwest wall of TOC is of concrete construction on the order



Ms. Susan Price

13 July 1988

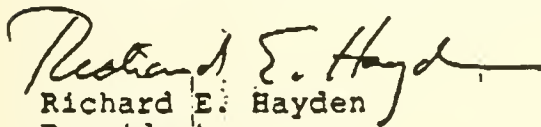
of eight or more inches thick. Using this assumption, the calculated internal noise levels due to the Parkside cooling unit are very low, as shown in the lowest curve on Attachment D. However, the noise transmission through windows will be considerably greater than through the end wall of TOC. To check on a worst case scenario, we assumed that the TOC windows were actually at the location of the Southwest wall only 50 feet from the cooling unit (note that those more distant will be exposed to a lower noise level). Our calculations show that, even in this worst-case scenario, the interior noise levels would fall well below PNC 40, and would thus be acceptable to most residents. The impact on any residential unit on the northwest or southeast facing walls of TOC would be considerably less than that shown below because of; the reduction in noise level which occurs as one moves away from a noise source. For this analysis we have assumed that windows are closed and well sealed. Open windows would of course allow more noise to enter a particular living space, possibly causing the criteria to be exceeded. We also note that persons using balconies might be able to hear the cooling unit above the background noise.

A more detailed study of this issue could be done, but we do not believe that it is warranted, based upon the enclosed calculations.

Finally, we note that, if the noise impact of the Parkside mechanical units is ultimately found to be objectionable by a significant number of neighbors, solutions are readily available in the form of add-on noise attenuation devices.

Very Truly Yours,

TECHNOLOGY INTEGRATION AND DEVELOPMENT GROUP, INCORPORATED


Richard E. Hayden
President

js

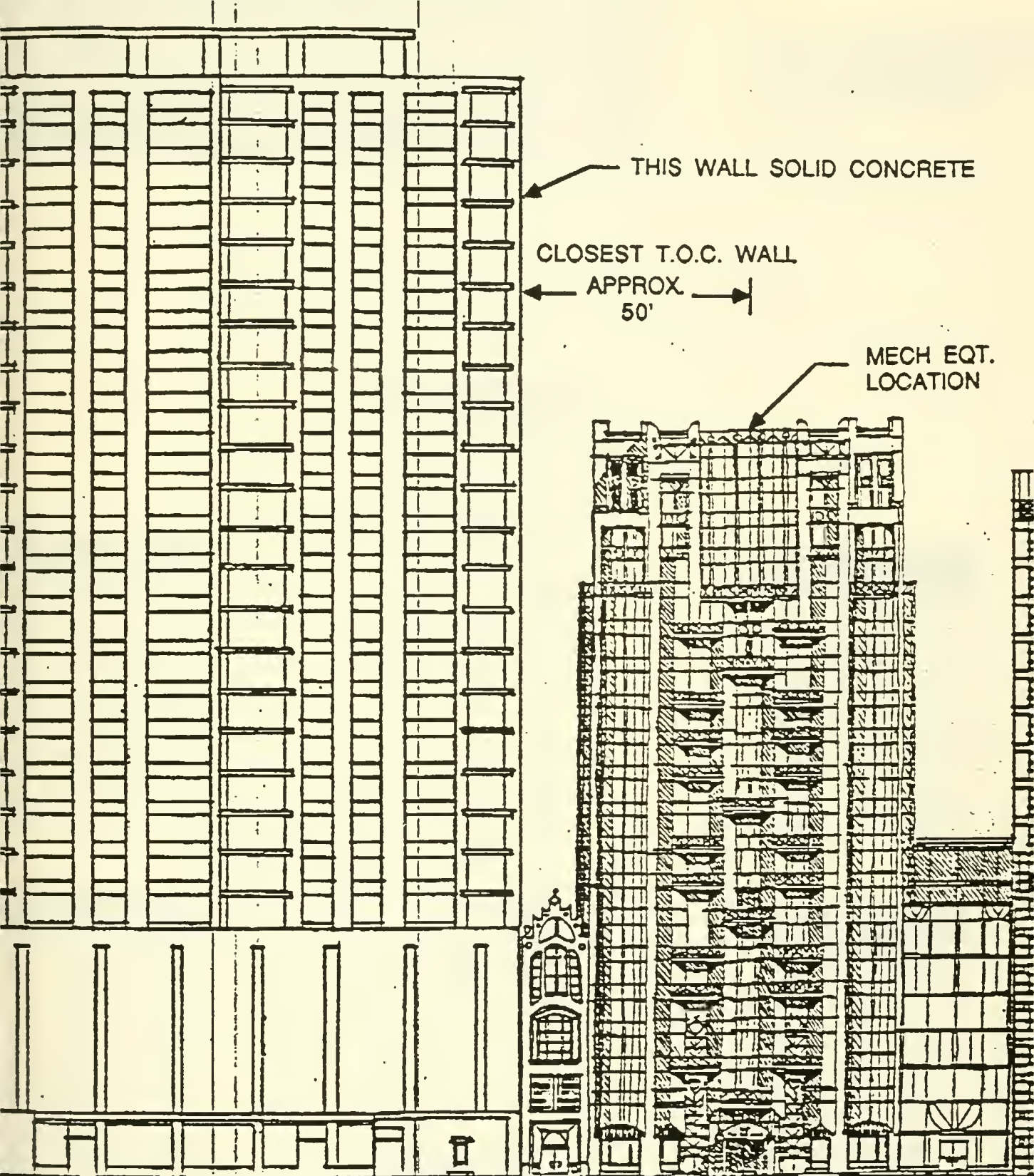




Attachment A

LOCATION OF PARKSIDE ROOFTOP UNIT
WITH RESPECT TO TREMONT-ON-THE-COMMON





ATTACHMENT A. LOCATION OF EQUIPMENT
AND NEAREST T.O.C. WALL



Baltimore Aircoil

BALTIMORE AIRCOIL COMPANY

Sound Rating Data Sheet

MODEL NO.

F1462-P

Octave Band and A-Weighted Sound Pressure Levels (SPL)
in dB RE 0.0002 Microbar for 5 ft and 50 ft Distances. Octave
Band 1 refers to the 63Hz Center Frequency Band.

BACK

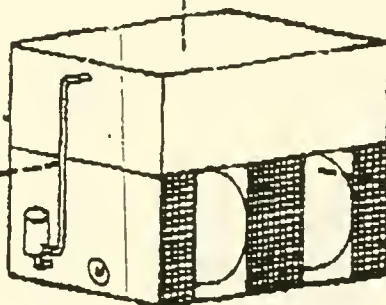
OCTAVE BAND	DISTANCE	
	5 FT	50 FT
1	74	61
2	72	63
3	70	57
4	67	57
5	67	54
6	65	50
7	60	41
8	60	41
dB (A)	72	59

TOP

OCTAVE BAND	DISTANCE	
	5 FT	50 FT
1	78	63
2	79	65
3	78	64
4	78	63
5	77	62
6	74	60
7	71	56
8	69	53
dB (A)	82	67

END

OCTAVE BAND	DISTANCE	
	5 FT	50 FT
1	76	65
2	72	62
3	71	58
4	69	60
5	68	55
6	63	51
7	60	47
8	55	41
dB (A)	72	61



END

OCTAVE BAND	DISTANCE	
	5 FT	50 FT
1	76	65
2	72	62
3	72	58
4	70	60
5	70	55
6	66	51
7	63	47
8	58	41
dB (A)	74	61

AIR INLET

OCTAVE BAND	DISTANCE	
	5 FT	50 FT
1	79	67
2	76	67
3	77	65
4	76	63
5	76	61
6	74	60
7	72	56
8	67	50
dB (A)	81	67

Calculated Sound Power Level
(PWL) in dB RE 10⁻¹² WATT.

OCTAVE BAND	dB RE 10 ⁻¹² WATT
1	97
2	96
3	94
4	93
5	91
6	89
7	85
8	80

B-2



Baltimore Aircoil

BALTIMORE AIRCOIL COMPANY, INC.
P.O. Box 7322, Baltimore, Maryland, 21227

Sound Attenuator Rating Sheet

All VX Equipment

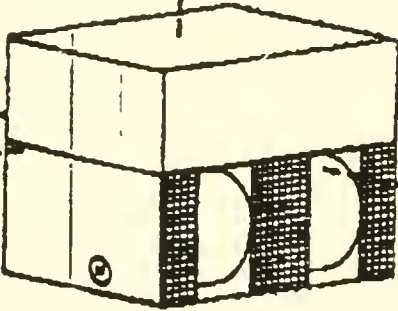
Attenuation, by definition, is the weakening or lessening of a force, amount, or value. Therefore, the ratings provided here reduce radiated sound and are to be arithmetically subtracted from net unit sound pressure levels.

The attenuation ratings provided below are suitable for use at any distance normally encountered in cooling tower sound analyses. Since the attenuation effect varies with position around the tower, directional sound pressure level reductions are given which correspond to the sides of the tower illustrated in the diagram below.

BACK	
OCTAVE BAND	REDUCTION
1	2
2	2
3	4
4	6
5	9
6	8
7	6
8	3

TOP	
OCTAVE BAND	REDUCTION
1	1
2	1
3	2
4	7
5	11
6	8
7	6
8	7

END	
OCTAVE BAND	REDUCTION
1	2
2	4
3	8
4	11
5	12
6	12
7	11
8	6



END	
OCTAVE BAND	REDUCTION
1	2
2	4
3	8
4	11
5	12
6	12
7	11
8	6

AIR INLET	
OCTAVE BAND	REDUCTION
1	1
2	5
3	10
4	17
5	15
6	18
7	13
8	8

Octave Band Sound Pressure Level (SPL) Reduction in dB RE 0.0002 Microbar for B.A.C. Intake and Discharge Attenuation Package. Octave Band 1 refers to the 63Hz Center Frequency Band.

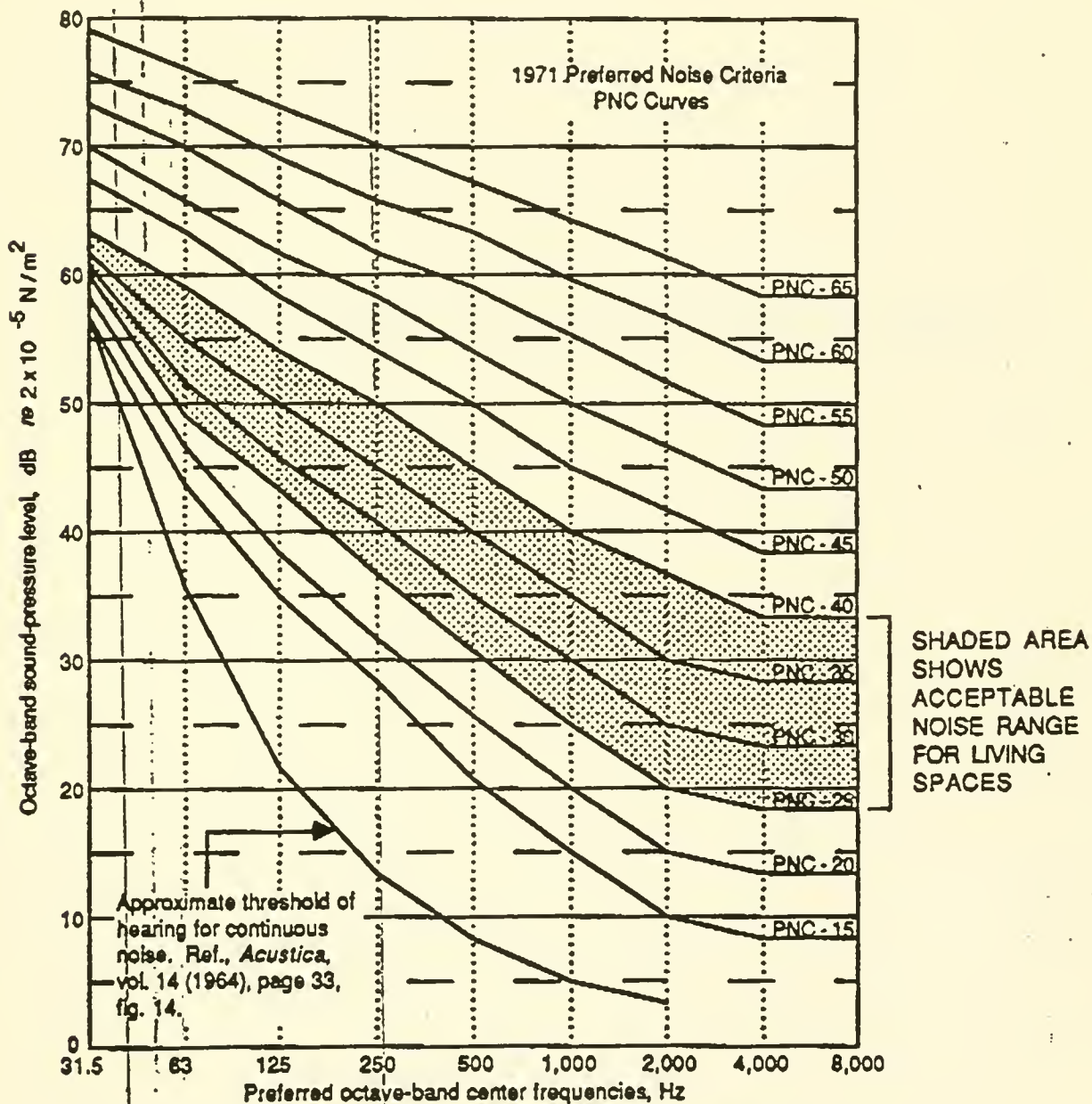
Attachment C

CRITERIA FOR INTERIOR NOISE IN LIVING SPACE



ATTACHMENT C.

BERANEK'S CRITERIA FOR ALLOWABLE NOISE LEVELS IN LIVING SPACES (OTHER EXPERTS ARGUE THAT PNC - 35 IS UPPER LIMIT)



Preferred noise criteria (PNC) curves (1971). (Beranek, 1971).

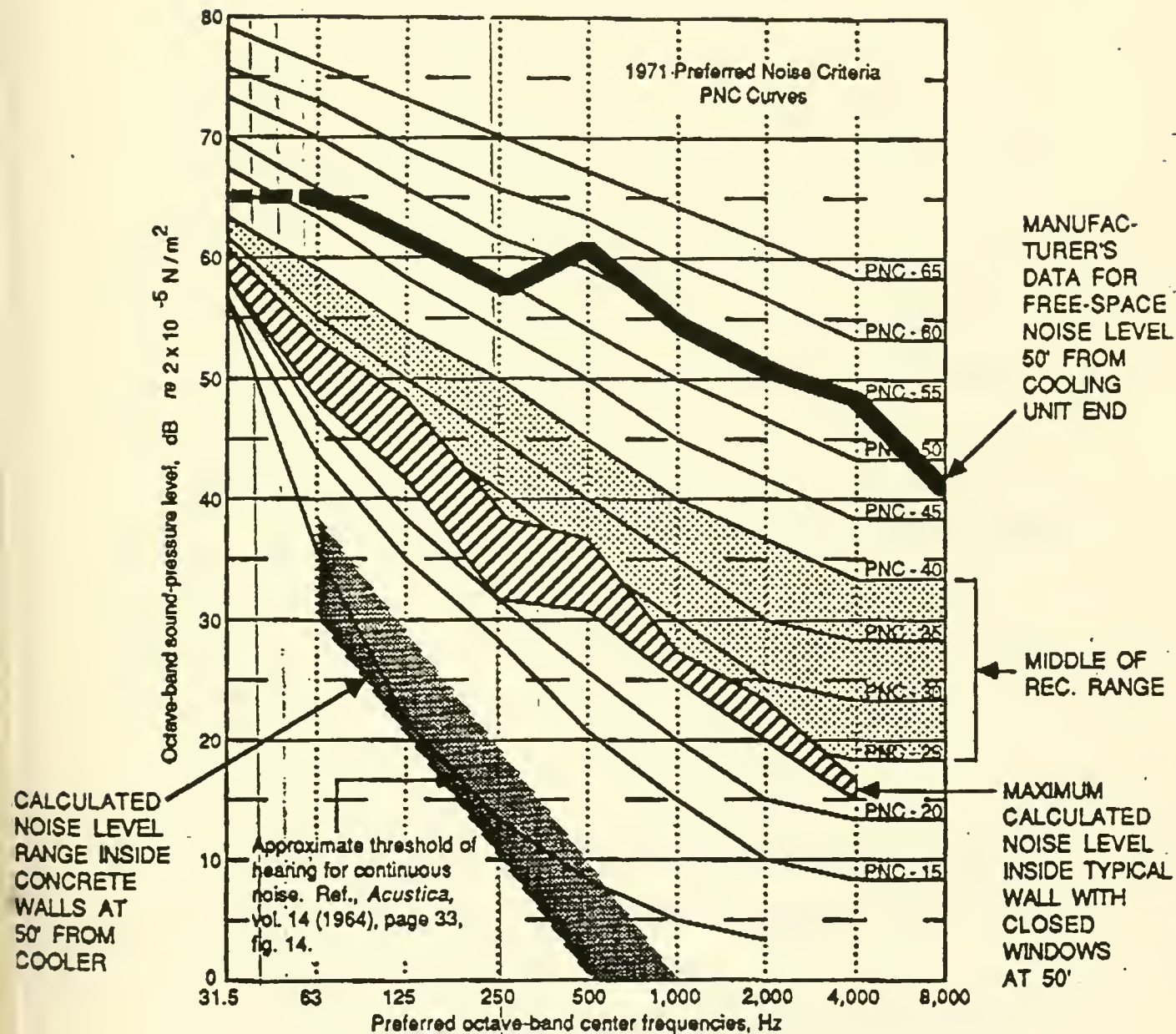
Attachment D

CALCULATED WORST-CASE IMPACT OF PARKSIDE EAST UNIT
ON TREMONT-ON-THE-COMMON LIVING SPACES CLOSEST TO PARKSIDE



ATTACHMENT D.

CALCULATED NOISE LEVELS IN T.O.C. ASSUMING TWO TYPES OF POSSIBLE WALL CONSTRUCTION



165 and 172 Tremont
Evaluation of
Ambient Noise Levels

Introduction

This report evaluates the results of an analysis of the ambient noise levels at 165 and 172 Tremont Streets (the proposed Parkside East and Parkside at Mason Place projects) to determine their conformance with Design Noise Levels established by the U.S. Department of Housing and Urban Development.

The Noise Assessment Guidelines ("NAG") (see Exhibit 1) developed by the Department of Housing and Urban Development form the basis for this evaluation. Specifically, the projects' exposure to the sources of noise described below are evaluated in this study:

- (1) Aircraft noise
- (2) Railway noise
- (3) Roadway noise within 1000 feet, provided that:
 - (a) Adjusted Average daily automobile traffic is greater than 1000 vehicles.
 - (b) Adjusted Average daily heavy truck traffic is greater than 100 vehicles.

Exhibits 2 and 3 identify the location of the proposed Parkside projects situated in the block bounded by Tremont, Avery, Mason and West Streets and the circulation patterns for the roadways within the 1000 foot assessment area.

All four of the projects' border streets are one-way:

Street	Direction	Travel Lane	Parking
Tremont	Southbound	4	No parking
Avery	Eastbound	1	Both sides
Mason	Northbound	1	West side
West	Westbound	1	Both sides

Noise Assessment Locations ("NAL"), are those areas near the project site where significant noise is expected. NALs are established at 6.5 feet from the building facade. (See Exhibit 4).

Conclusions

This study assessed the impact on the Parkside site of three noise sources: air, rail, and automobile/truck traffic. Logan Airport and the area's two major commuter rails, located at North and South Stations, are well outside the applicable assessment range, and thus do not constitute a source of ambient noise. Major roadways within a 1000 foot radius of the site were evaluated to determine their contribution to ambient noise. Exhibits 6 and 7 suggest that while the ambient noise levels at the Parkside site are presently within

the normally unacceptable range (approximately 74.5 DNL), as that range is defined by the Department of Housing and Urban Development, analysis of present traffic patterns demonstrates that the primary source of that noise is heavy trucks and buses along Tremont Street. Moreover, the developers of Parkside have sought to assure that (1) the proposed project does not deleteriously affect the existing ambient noise levels and (2) that Parkside residents are sufficiently protected from undesirable outdoor noise. Their response, through building design, construction and other operating procedures, is described later in this study.

Avery, Mason and West Streets

While the study evaluated the noise generated at West Street (see Exhibit 6 and 7), the presence of the Tremont-on-the-Common structure, abutting the northside of the proposed projects and rising more than 50 feet above both them, serves to attenuate the effects on Parkside of noise generated on West Street.

The proximity of 172 Tremont to Avery Street called for evaluation of that roadway. Noise levels on Avery Street were found to be well-within the acceptable range. This is likely a result of the low volume of automobile and truck traffic and, specifically, the absence of heavy trucks and buses. 170 Tremont (Parkside West), in a fashion similar to Tremont-on-the-Common, serves to attenuate the impact at 165

Tremont of noise emanating from Avery Street.

Mason Street, which runs one-way northbound on the easterly side of the project site (parallel to Tremont Street) generates approximately 54 vehicles during the peak evening hours (see supplementary comments to Transportation Study/Access Plan as provided by HMM Associates). While traffic counts for this roadway were not available, an average daily traffic count can be estimated by applying a peak-hour-to-total-traffic rate that can be inferred from Tremont Street traffic volumes ($1500/20000 = 54/x = 720$ ADT). At 720 vehicles per day, however, the adjusted average daily traffic count renders the noise level well below 55.

Traffic volume on Tremont Street, one of the City's major thoroughfares, was evaluated at a point mid-way between 165 and 172 Tremont. As Exhibits 6 and 7 suggest, traffic along Tremont Street consists of large numbers of slow-moving automobiles and light-weight vehicles and heavy trucks and buses. While noise generated from auto traffic is significantly lower than that from trucks/buses, the overall ambient noise level at the site reflects the impact of noise generated from truck and bus traffic.

Summary

As discussed above, ambient noise levels which impact the proposed Parkside projects and fall within the normally unacceptable range are generated along Tremont Street only.

Whereas residents with direct line-of-sight to the roadway are most exposed, it can be inferred from the research that the undesirable level of noise generated by large trucks and buses declines rapidly during the late evening and early morning hours -- those periods of time which are most likely to affect Parkside residents.

Mitigation Measures

The developers of Parkside have taken the following actions toward minimizing the effects of the noise levels as they presently exist:

- (1) Building design
- (2) Use of certain insulation, brick, stone materials
- (3) Windows

(4) Parking Plan: The plan does not provide for parking spaces reserved for commercial use nor for use by shoppers; the purchase price for residential parking spaces discourages car ownership; and the provision of on-call car rental services serves as a disincentive to car ownership.

(5) Retail shops: the nature of the proposed retail shops is such that clientele will consist most likely of Parkside residents or shoppers already in the area. Thus, retail use of the ground levels will not generate increased vehicular traffic.

Future Noise Levels

It is estimated that the proposed projects (see

Transportation Access Study prepared by HMM Associates) will generate a maximum of 46 vehicles during each of the peak traffic periods (i.e., 7:00-9:00 a.m. and 4:00-6:00 p.m.). Given that this is the worst-case level of Parkside-generated traffic expected during a 24-hour period, the study does not address future traffic-related noise levels at the site.

M E T H O D O L O G Y

Traffic Data

Traffic data was obtained from traffic counts conducted by Traffic Control Systems for the City of Boston (see attached Addenda).

- o In those instances where traffic data was generated prior to 1986, an annual growth factor of 6.5% is consistently applied to traffic counts for all roadways in the assessment area.
- o In general, traffic movement data reflects counts taken for 11-hour intervals. 24-hour counts (Average Daily Traffic - "ADT") are calculated using a factor of 1.15-1.20.
- o The composition/mix of traffic as identified in Exhibit 5 and is consistently applied to all streets within the assessment area, and is based on observations identified in the attached Addenda.

Other Assumptions

(1) Average speed

- o (automobiles): 25 mph
- o (heavy trucks): less than 50 mph

(2) Night-time traffic

- o (autos): 15% of ADT

o (heavy trucks): 1%

(3) Street gradients - zero.

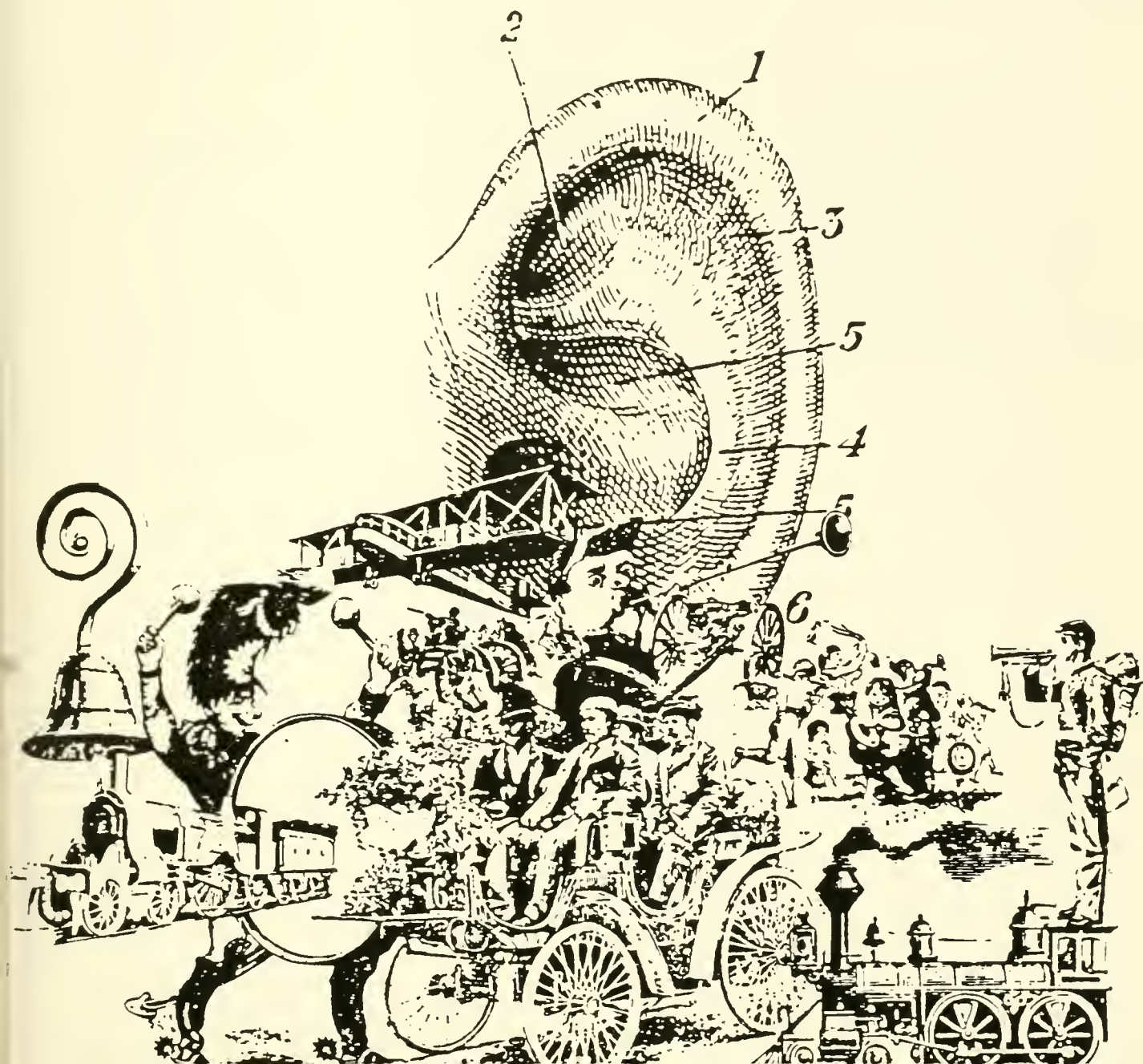
(4) Total noise level is calculated for Tremont Street based on a combination of automobile traffic and truck traffic decibel levels using Table 1 of NAG.



U.S. Department of Housing and Urban Development
Office of Policy Development and Research

Exhibit 1

Noise Assessment Guidelines



roduction

These guidelines are presented as part of a continuing effort by the Department of Housing and Urban Development to provide decent housing and a suitable living environment for all Americans.

The procedures described here have been developed so that people without technical training will be able to assess the exposure of a housing site to present and future noise conditions. In this context, the site may hold only one small building, in which case the noise assessment is straightforward. Larger sites may hold larger buildings, or many buildings, and the noise level may be different at different parts of the site (or buildings). Assessments of the noise exposure should be made at representative locations around the site where significant noise is expected. These are designated as "Noise Assessment Locations," abbreviated NAL in the following text.

The only materials required are a map of the area, a ruler (straight edge), a protractor and a pencil. Worksheets and working figures are provided separately.

All of the information you need can be easily obtained - usually by telephone. For convenience, this information is listed at the beginning of each section under headings that indicate the most likely source. While you are obtaining this information, be sure to ask about any approved plans for future changes that may affect noise levels at the site - for example, land-use changes, changes in airport runway traffic, widening of roads, and so forth. In all evaluations, you

should assess the condition that will have the most severe or most lasting effect on the use of the site.

Wherever possible, you should try to assess noise environments expected at least ten years in the future.

The degree of acceptability of the noise environment at a site is determined by the outdoor day-night average sound level (DNL) in decibels (dB). The assessment of site acceptability is presented first as an evaluation of the site's exposure to three major sources of noise - Aircraft, Roadways, and Railways. These are then combined to assess the total noise at a site. Worksheets are provided at the back of these Guidelines to use in summarizing your evaluations.

The noise environment at a site will come under one of three categories:

Acceptable (DNL not exceeding 65 decibels) The noise exposure may be of some concern but common building constructions will make the indoor environment acceptable and the outdoor environment will be reasonably pleasant for recreation and play.

Normally Unacceptable (DNL above 65 but not exceeding 75 decibels) The noise exposure is significantly more severe; barriers may be necessary between the site and prominent noise sources to make the outdoor environment acceptable; special building constructions may be necessary to ensure that people indoors are sufficiently protected from outdoor noise.

Unacceptable (DNL above 75 decibels) The noise exposure at the site is so severe that the construction cost to make the indoor

noise environment acceptable may be prohibitive and the outdoor environment would still be unacceptable.

When measuring the distance from the site to any noise source, measure from the source to the nearest points on the site where buildings having noise-sensitive uses are located. These points define the Noise Assessment Locations for the site. The relevant measurement location for buildings is a point 2 meters (6.5 feet) from the facade

If at any point during the assessment the site's exposure to noise is found to be Unacceptable or Normally Unacceptable, every effort should be made to improve the condition, e.g., the location of the proposed dwellings can be changed or some shielding can be provided to block the noise from that source.

Where quiet outdoor space is desired at a site, distances should be measured from the important noise sources to the outdoor area in question and the combined noise exposure should be assessed.

Frequently, the locations of dwellings have not yet been specified at the time the noise assessment of a site is made. In these instances, distances used in the noise assessment should be measured as 2 meters less than the distance from the building setback line to the major sources of noise.

Combining Sound Levels in Decibels

The noise environment at a site is determined by combining the contributions of different noise sources. In these guidelines, workcharts are provided to estimate the contribution of aircraft, automobile, truck, and train noise to the total day-night average sound level (DNL) at a site. The DNL contributions from each source are expressed in decibels and entered on Worksheet A. The combined DNL from all the sources is the DNL for the site and is the value used to determine the acceptability of the noise environment.

Sound levels in decibels are *not* combined by simple addition! The following table shows how to combine sound levels:

Difference in Sound Level	Add to Larger Level
	3 0
	2 5
	2 1
	1 8
	1 5
	1 2
	1 0
	0 8
	0 6
	0 5
	0 4
	0 3
	0 2
	0 1
greater than 16	0

Use the table by first finding the numerical difference in sound level between two levels being combined. Entering the table with this value, find the value to be added to the larger of the two levels; add this value to the larger level to determine the total. Where more than two levels are to be combined use the same procedure to combine any two levels, then use this subtotal and combine it with any other level, and so on. Fractional numerical values may be interpolated from the table; however, the final result should be rounded to the nearest whole number.

Example 1: In performing a site evaluation, the separate DNL values for airports, road traffic, and railroads have been listed on Worksheet A as 56, 63, and 61 decibels. In order to complete the final evaluation of the site, these separate DNL values must be combined. The difference between 63 and 56 is 7; from the table you find that 0.8 should be added to 63, for a subtotal of 63.8. The difference between 63.8 and 61 is 2.8, from the table you interpolate that approximately 0.9 should be added to 63.8 for a total of 65.7 or 66 dB when rounded to whole numbers. This example shows how noise from different sources may be Acceptable, individually, at a site, but when combined, the total noise environment may exceed the Acceptable DNL limit of 65 decibels.

Roadways

Necessary Information

To evaluate a site's exposure to roadway noise, you will need to consider all roads that might contribute to the site's noise environment, roads farther away than 1000 feet normally may be ignored.

Before beginning the evaluation, determine if roadway noise predictions already exist for roads near the site. Also try to obtain all available information about approved plans for roadway changes (e.g., widening existing roads or building new roads) and about expected changes in road traffic (e.g., will the traffic on this road increase or decrease in the next 10 to 15 years).

If this information exists, it should be available from the City (County) Highway or Transportation Department. If not, record the following information on page 1 of Worksheet C:

- The distances from the NAL's for the site to the near edge of the nearest lane and the far edge of the farthest lane for each road.
- Distance to stop signs.
- Road gradient, if 2 percent or greater.
- Average speed.
- The total number of automobiles for both directions during an average 24-hour day. Traffic engineers refer to this as ADT. Average Daily Traffic (or sometimes AADT, meaning Annual Average Daily Traffic).
- The number of trucks during an average 24-hour day in each direction.
- If possible, separate trucks into "heavy trucks" – those weighing more than 26,000 pounds with three or more axles – and "medium trucks" – those between 10,000 and 26,000 pounds. (Each medium truck is counted as equal to 10 automobiles.) Trucks under 10,000 pounds are counted as automobiles. Count buses capable of carrying more than 15 seated passengers as "heavy trucks" – others, as "medium" trucks. If it is

not possible to separate the trucks into those that are heavy and those that are not, treat all trucks as though they are "heavy."

Note: If the road has a gradient of 2 percent or more, record the numbers for uphill and downhill traffic separately since these figures will be needed later; otherwise, simply record the total number of trucks. Most often you will have to assume that the uphill and downhill traffic are equally split.

- The fraction of ADT that occurs during nighttime (10 p.m. to 7 a.m.). If this is unknown, assume 0.15 for both trucks and autos.

Evaluation of Site Exposure to Roadway Noise

Traffic surveys show that the amount of roadway noise depends on the percentage of trucks in the total traffic volume. To account for this effect, you must evaluate automobile and truck traffic separately and then combine the results.

The noise environment at each site due to traffic noise is determined by utilizing a series of Workcharts to define the contribution of automobiles and trucks from one or more roads at that site. Each noise source yields a separate DNL value.

Workchart 1 provides a graph for assessing a site with respect to the noise from automobiles, light and medium trucks; Workchart 2 provides a similar graph for assessment of heavy truck noise. These values are combined for each road affecting the noise environment at the site to obtain the total contribution of roadway noise. Remember, the noise from aircraft and railways must also be considered before determining the suitability of this site's noise environment.

Effective Distance

Before proceeding with these separate eval-

uations, however, determine the "effective distance" to each road from the dwelling or outdoor residential activity (the NAL's for the site) by averaging the distances to the nearest edge of the nearest lane and to the farthest edge of the farthest lane of traffic. (See Example 5, page 6, and Figure 4, page 7.)

Note: For roads with the same number of lanes in both directions, the effective distance is the distance to the center of the roadway (or median strip, if present).

Automobile Traffic

Workchart 1 was derived with the following assumptions:

- There is line-of-sight exposure from the site to the road; i.e., there is no barrier which effectively shields the site from the noise of the road.
- There is no stop sign within 600 feet of the site; traffic lights do not count because there is usually traffic moving on one street or the other.
- The average automobile traffic speed is 55 mph.
- The nighttime fraction of ADT is 0.15.

If each road meets these four conditions, proceed to Workchart 1 for the evaluation. Enter the horizontal axis with the effective distance from the roadway to the NAL; draw a vertical line upward from this point. Enter the vertical axis with the effective automobile ADT; draw a horizontal line across from this point. (The "effective" automobile ADT is the sum of automobile, light truck, and 10 times the number of medium trucks in a 24-hour day.) Read the DNL value from Workchart 1 where the vertical and horizontal lines intersect. Record this value in column 16, Worksheet C.

But:

If any of the four conditions is different, make

Example 5: The site shown in Figure 4 is exposed to noise from three major roads: Road No. 1 has four lanes, each 12 feet wide, and a 30-foot wide median strip which accommodates a railroad track. Road No. 2 has four lanes, each 12 feet wide. Road No. 3 has six lanes, each 15 feet wide, and a median strip 30 feet wide.

The distance from NAL No. 1 to the near edge of Road No. 1 is 300 feet. The distance

to the far edge of Road No. 1 is 300 feet, plus the number of lanes times the lane width, plus the width of the median strip. Thus, the distance to the farthest edge of the road is

$$300 + (4 \times 12) = 378 \text{ ft}$$

The effective distance is

$$378 \pm 300 = 339 \text{ ft}$$

This is the value to be entered on line 1c of Worksheet C. The effective distances from the appropriate NAL's to Road No. 2 and Road No. 3 are found by the same method.

The distances shown in Figure 4 will be used for all roadway examples in this booklet.

Site showing How Distance Should
be Measured from the Noise Assessment Loca-
tion to the Dwelling Nearest to the Source

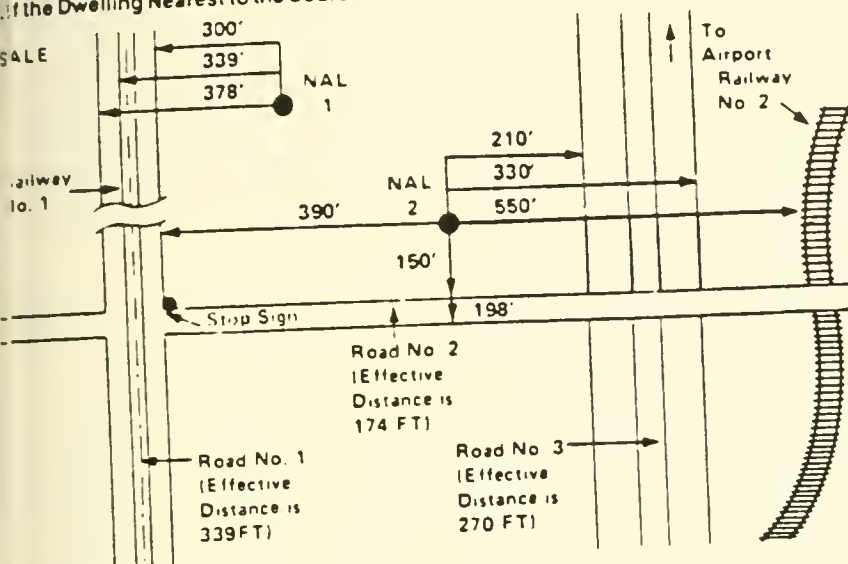
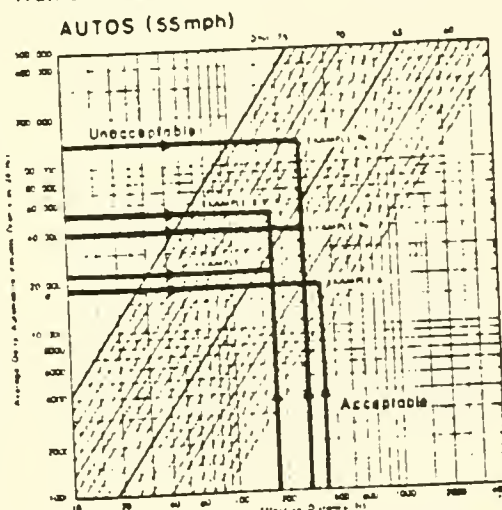


Figure 5
Use of Workchart 1 To Evaluate Automobile
Traffic Noise



Example 7: Road No. 2 has a stop sign at 390 feet from NAL No. 2. The automobile ADT is reported as being 32,500 vehicles (line 5c of Worksheet C). From Table 3 we interpolate between 300 and 400 feet to find the adjustment factor for stop-and-go traffic to be 0.69. The adjusted traffic ADT is

$$0.69 \times 32,500 = 22,425 \text{ vehicles per day}$$

and with an effective distance of 174 feet from NAL No. 2, we find from Workchart 1 that the approximate value of DNL is 64 dB.

Example 8: Suppose that the stop sign on Road No. 2 were replaced by a traffic signal for which no stop-and-go adjustment is made and that the ADT increases to 75,000 vehicles. In addition, assume that the average speed is 45 mph instead of 55 mph. You adjust the new automobile ADT of 75,000 vehicles by the Auto Speed Adjustment Factor from Table 4

$$0.67 \times 75,000 = 50,250 \text{ vehicles}$$

and at an effective distance of 174 feet find from Workchart 1 that the approximate value of DNL is 67 dB.

work through the examples. After you have become familiar with the Guidelines, you will be able to work examples directly from the worksheets without referring back to the text. To simplify your work, all the adjustment factors are summarized at the back of these Guidelines.

Adjustments for Automobile Traffic

Stop-and-Go Traffic:

If there is a stop sign (not a traffic signal) within 600 feet of the NAL so that the flow of traffic is completely interrupted on the road under consideration, find the stop-and-go adjustment factor for automobiles from Table 3. Enter this value in column 9 on Worksheet C.

Table 3

Distance from NAL to Stop Sign In Feet	Automobile Stop-and-Go Adjustment Factor
0	0.10
100	0.25
200	0.40
300	0.55
400	0.70
500	0.85
600	1.00

Average Traffic Speed:

If the average automobile speed is other than 55 mph, enter the appropriate adjustment from Table 4 in column 10 of Worksheet C.

Table 4

Average Traffic Speed	Auto Speed Adjustment Factor
20 (mph)	0.13
25	0.21
30	0.30
35	0.40
40	0.53
45	0.67
50	0.83
55	1.00
60	1.19
65	1.40
70	1.62

necessary adjustments (on page 2, let C) listed below and then use Chart 1 for the final evaluation. In a few general words about adjustments, they are applied in these Guidelines. Each Workchart has been derived for a condition which is often found in real cases. Where conditions differ from the guideline, they are accounted for by a set of one or more adjustment factors. Adjustment factors are used as multipliers of the average number of vehicles during a 24-hour day. If more than one adjustment is required, it is not necessary that each be multiplied times the basic flow separately, all adjustment factors multiplied together, and then multiplied the original traffic flow data. This will be clearer as you examine the Worksheets at the back of these Guidelines and

Example 6: Road No. 1 meets the four conditions that allow for an immediate evaluation. During the information necessary for evaluation, it was found that the automobile ADT is 18,000 vehicles (Line 5c of Worksheet C). On Workchart 1 we locate on the vertical scale the point representing 18,000 and on the horizontal scale the point representing 339 feet (see Figure 5). (Note that we must estimate the location of this point.) Using a straight-edge we draw lines to project these two values and find that the exposure to automobile noise from this road is a DNL of 58 dB as read from the scale at the top of the graph.

Daytime Adjustment.

DNL values are affected by the proportion of traffic volume that occurs during "daytime" (7 a.m. to 10 p.m.) and "nighttime" (10 p.m. to 7 a.m.). The graph on Workchart 1 assumes that 15 percent of the total ADT occurs during nighttime. If a different proportion of the traffic occurs at night, find the appropriate nighttime adjustment factor from Table 5. Record your answer in column 11 of Worksheet C.

Table 5

Nighttime Adjustment Factor	ADT
0.43	
0.46	
0.50	
0.62	
0.81	
1.00	
1.19	
1.38	
1.57	
1.77	
1.96	
2.15	
2.34	

Once you have selected all the appropriate adjustment factors and entered them on Worksheet C, multiply all the factors together, then multiply by the automobile ADT (column 12) for 24 hours, found on Page 1 of Worksheet C. The resulting adjusted ADT should be entered in column 13. This is the ADT value to be used in conjunction with the effective distance from the road to the site, to find the DNL value on Workchart 1. Enter this DNL value in column 14 of Worksheet C. Remember this is the DNL from automobile (as well as light and medium truck) noise; you must still find the contribution from heavy truck noise in order to obtain the total DNL produced by the roadway you are assessing.

Example 9a: Road No. 3 is a limited access highway with no stop signs and the average speed is 55 mph. Current traffic data indicate an automobile ADT of 40,000 vehicles of which 15 percent occurs during nighttime hours (10 p.m. to 7 a.m.). With an effective distance of 270 feet to NAL No. 2, Workchart 1 is used to show that the DNL for existing automobile traffic is between 63 and 64 dB. Round off to 64 dB.

Attenuation of Noise by Barriers:

This adjustment reduces the noise produced by automobiles and trucks on the same road. Instructions for this adjustment appear after the noise assessment for truck traffic below.

Truck Traffic

Wherever possible, separate the average daily volume of trucks into heavy trucks (more than 26,000 pounds vehicle weight and three or more axles); medium trucks (less than 26,000 pounds but greater than 10,000 pounds); light trucks (counted as if they are automobiles). You should already have accounted for medium and light trucks in your automobile evaluation. Do not forget buses that can carry more than 15 seated passengers are counted as heavy trucks. Heavy trucks (including buses) must be analyzed separately because they have quite different noise characteristics. If it is not possible to separate the trucks into those that are heavy and those that are not, treat all trucks as though they are "heavy."

Workchart 2, which is used to evaluate the site's exposure to heavy truck noise, was derived with the following assumptions:

- There is line-of-sight exposure from the site to the road, i.e., there is no barrier which effectively shields the site from the road noise.
- The road gradient is less than 2 percent.
- There is no stop sign (traffic signals are permissible) within 600 feet of the site.
- The average truck traffic speed is 55 mph.
- The nighttime fraction of ADT is 0.15.

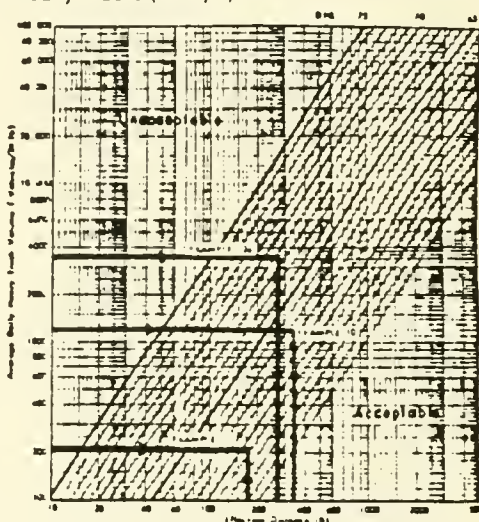
If the road meets these five conditions, proceed to Workchart 2 for an immediate evaluation of the site's exposure to heavy truck noise from that road.

But:

If any of the conditions is different, make the

necessary adjustment(s) listed below and then use Workchart 2 for the evaluation.

Figure 6.
Use of Workchart 2 to
Evaluate Heavy Truck Noise
Heavy Trucks (55 mph)



Adjustments for Heavy Trucks

Road Gradient:

If there is a gradient of 2 percent or more, find the appropriate adjustment factor, for heavy trucks going uphill only, as shown in Table 6. List this factor in column 17 of Worksheet C.

Table 6

Percent of Gradient	Adjustment Factor
2	1.4
3	1.7
4	2.0
5	2.3
6 or more	2.5

Example 9b: However, traffic projections estimate that in 10 years the ADT will increase to 100,000 vehicles at an average speed of 55 mph and nighttime usage will increase to 25 percent. For future traffic, you must adjust the future ADT of 100,000 for the effect of increased nighttime use. From Table 5, you find an adjustment factor of 1.38. The adjusted ADT is

$$1.38 \times 100,000 = 138,000$$

and at an effective distance of 270 feet you find from Workchart 1 that the DNL will increase to 69 dB; therefore, provision for extra noise control measures should be explored. We will examine in Example 13 the effect of terrain as a shielding barrier that provides sound attenuation.

Example 10: Road No. 1 on Figure 4 meets the four conditions that allow for an immediate evaluation. The ADT for heavy truck flow is 1200 vehicles. With an effective distance of 339 feet, Workchart 2 shows that the exposure to truck noise from this road is a DNL of 63 dB at NAL No. 1.

Average Traffic Speed:

Use this adjustment if the average speed is from 55 mph. If the average truck speed differs with direction, treat the uphill and downhill traffic separately. Select the appropriate adjustment factors from Table 7 and enter them in column 18 of Worksheet C.

Heavy Truck Speed Adjustment Factor
0.81
1.00
1.17
1.38

Once you have found the speed adjustment factor, you can combine the uphill and downhill traffic. For uphill traffic, multiply the adjustment factor times the speed adjustment factor times uphill traffic volume (truck ADT in column 19) (assuming one-half the total 24-hour average number of trucks unless specific information to the contrary exists), entering the product in column 20. Multiply the speed adjustment factor for downhill traffic times the downhill traffic volume (truck ADT in column 19). Add the values for uphill and downhill traffic, entering this sum in column 21. You may now complete the assessment of heavy truck noise without regard to uphill and downhill traffic separation.

Stop-and-Go Traffic:

If there is a stop sign (remember, not a traffic light) within 600 feet of an NAL for the site or the road being assessed, find the adjustment factor determined according to Table 8 and enter it in Column 22 of Worksheet C.

Table 8

Heavy Truck Traffic Volume per Day	Heavy Truck Stop-and-Go Adjustment Factor
Less than 1200	1.8
1201 to 2400	2.0
2401 to 4800	2.3
4801 to 9600	2.8
9601 to 19,200	3.8
More than 19,200	4.5

Nighttime Adjustment

After all the above adjustments are made, do not forget to adjust for nighttime operations if they are not 15 percent of the total ADT, using the factors obtained from Table 5 just as for automobiles. Enter this value in column 23 of Worksheet C.

At this point, multiply the adjustment factors for nighttime and stop-and-go traffic times the heavy truck traffic volume in column 21 to find the adjusted heavy truck ADT, entering the product in column 24. Use this value and the effective distance from the NAL to the road to find the truck DNL from Workchart 2, entering your answer in column 25 of Worksheet C. If no shielding barriers are to be considered, combine the DNL from heavy trucks with the DNL from automobiles (column 14). The result is the DNL from the road being assessed and should be entered on Worksheet C.

But:

If a shielding barrier is to be considered for the site, make the analysis described below separately for automobiles and then for heavy trucks before combining the DNL values. This step is necessary since barriers are far more effective for automobiles than for heavy trucks. Once you have found the amount of attenuation provided by the barrier for automobiles, enter it in column 15. Find the value of barrier attenuation for heavy

trucks and enter it in column 25. Subtract these attenuation values from the DNL values obtained previously (column 14 and 24), entering the reduced DNL values in the appropriate columns 16 and 27. Combine the automobile and heavy truck DNL values, reduced by the attenuation provided by the barrier, to find the final DNL produced by the roadway at the site.

Remember to combine the contributions to DNL of all roads that affect the noise environment at each NAL for the site to obtain the total DNL from all roadways. Enter this DNL on both Worksheet C and the summary Worksheet A.

Attenuation of Noise by Barriers

Noise barriers are useful for shielding sensitive locations from ground level noise sources. For example, a barrier may be the best way to deal with housing sites at which the noise exposure is not acceptable because of nearby roadway traffic.

A barrier may be formed by the road profile, by a solid wall or embankment, by a continuous row of noise-sensitive buildings, or by the terrain itself. To be an effective shield, however, the barrier must block all residential levels from line of sight to the road; it must not have any gaps that would allow noise to leak through.

Some Preliminary Matters:

In evaluating noise barrier performance, you will be working with different kinds of "distances" between the sound source, the observer, and the barrier.

Actual Distance – the existing distance that would be measured using a tape measure with no corrections or adjustments. This may mean one of two things, depending on the application; either the:

- **slant distance** – the actual distance,

Example 11: Road No. 2 has a stop sign at 90 feet from NAL No. 2. There is also a road gradient of 4 percent. No heavy trucks are scheduled on this road, but a schedule shows an average of 12 large buses pass along the road per hour between 7 a.m. and 10 p.m., although no buses are scheduled during the remaining nighttime period. The buses are equally divided in each direction along the road. (Remember large buses, those that carry over 15 seated passengers, count as heavy trucks.) Find the ADT for the "heavy trucks" (the buses in this case) by multiplying the average number of vehicles per hour by the number of hours between 7 a.m. and 10 p.m. That is, $12 \times 3 = 36$, or 36 vehicles in each direction. Find from Table 6 that the gradient adjust-

ment factor for uphill traffic is 2.0. We find the truck volume adjusted for gradient is

$$\begin{aligned} \text{uphill:} & 90 \times 2.0 = 180 \\ \text{downhill:} & = 90 \\ \text{total (column 21)} & = 270 \text{ vehicles} \end{aligned}$$

From Table 8, we find the adjustment factor for stop-and-go traffic to be 1.8.

We also remember that we have no buses in the nighttime period and find the factor in Table 5 on page 8 for zero nighttime operations to be 0.43.

Our final adjusted ADT is (column 24)

$$1.8 \times 0.43 \times 270 = 209 \text{ Vehicles}$$

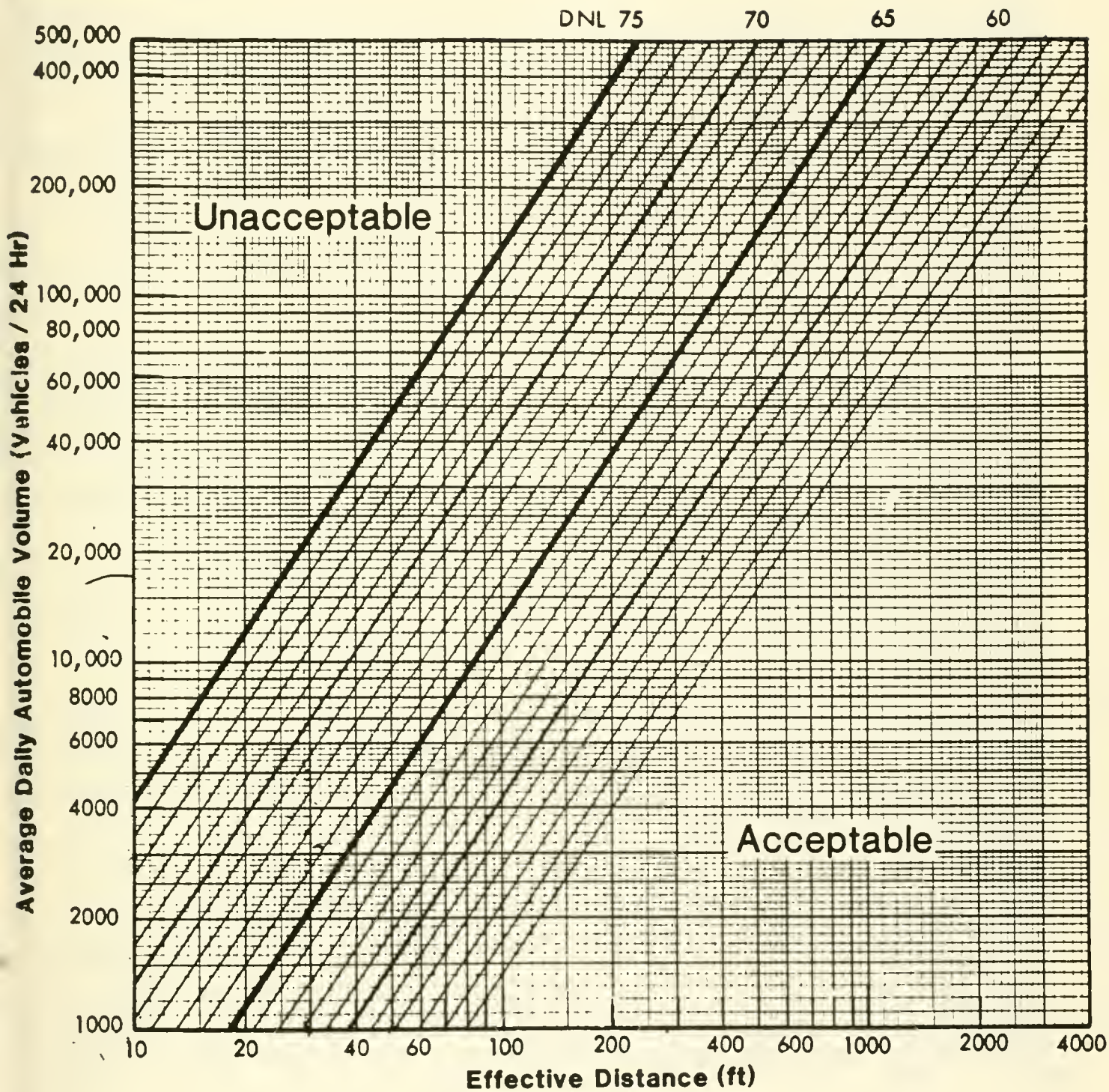
From Workchart 2, with an effective distance of 174 feet, we find a DNL of 59 dB.

Example 12a: Road No. 3 is a depressed highway and the profile shields all residential levels of the housing from line of sight to the traffic. The average truck speed is 50 mph. The ADT for heavy trucks is 4400 vehicles. We adjust for average speed (from Table 7).

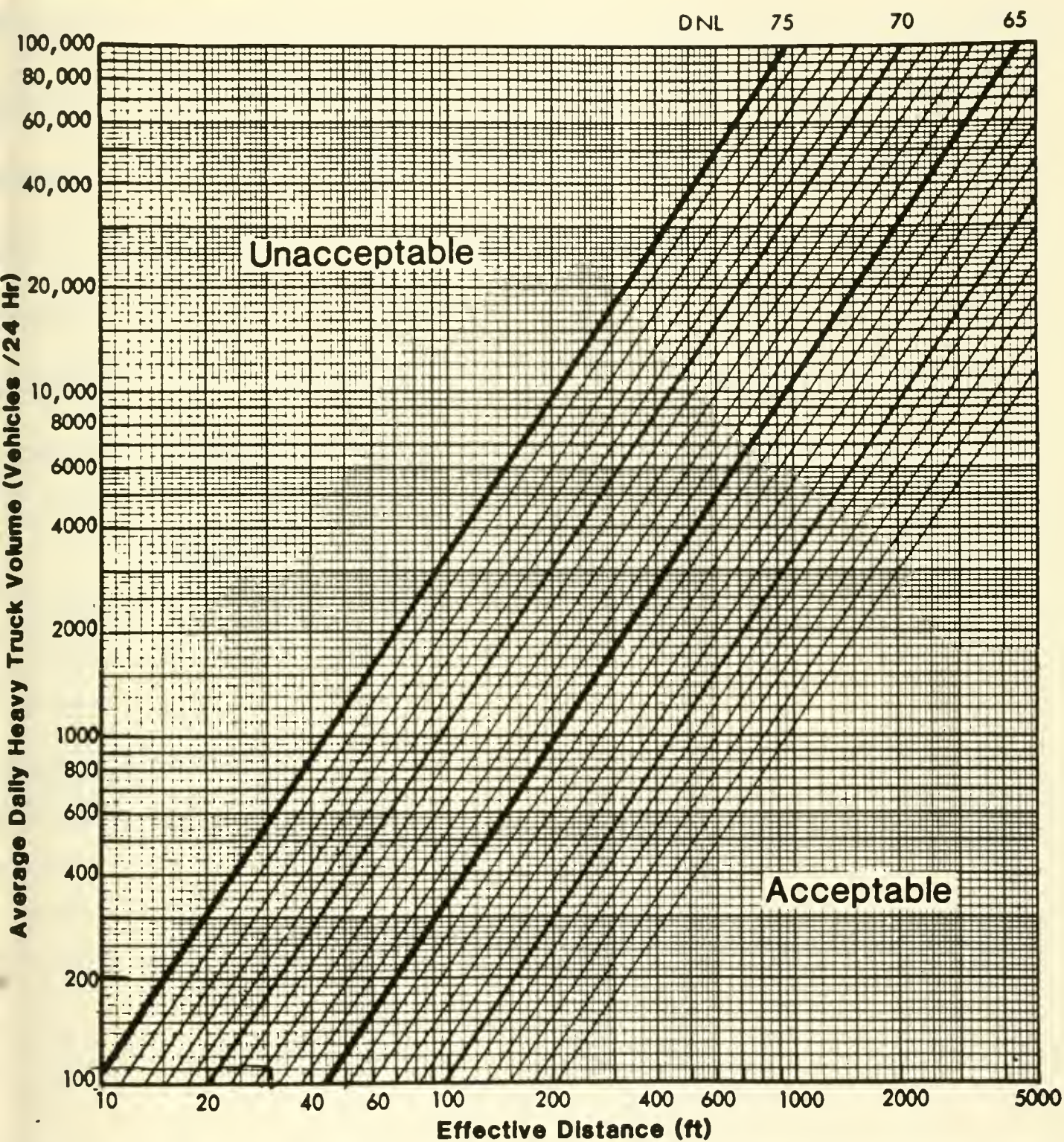
$$4400 \times 0.81 = 3564$$

and find from Workchart 2 that, with an effective distance of 270 feet, the DNL from truck noise would be 69 dB if no barrier existed. We proceed to analyze the barrier attenuation.

Workchart 1
Autos (55 mph)



Workchart 2
Heavy Trucks (55 mph)



Worksheet A
Site Evaluation

Noise Assessment Guidelines

Site Location _____

Program _____

Project Name _____

Locality _____

File Number _____

Sponsor's Name _____

Phone _____

Street Address _____

City, State _____

	Acceptability Category	DNL	Predicted for Operations in Year
Roadway Noise	_____	_____	_____
Aircraft Noise	_____	_____	_____
Railway Noise	_____	_____	_____

Value of DNL for all noise sources: (see page 3 for
combination procedure) _____

Final Site Evaluation (circle one)

Acceptable

Normally Unacceptable

Unacceptable

Signature _____

Date _____

Clip this worksheet to the top of a package
containing Worksheets B-E and Workcharts 1-7
that are used in the site evaluations

List all major roads within 1000 ft of the site:

1. _____

2. _____

3. _____

4. _____

Necessary Information

Road 1 Road 2 Road 3 Road 4

1. Distance in feet from the NAL to the edge of the road

a. nearest lane

b. farthest lane

c. average (effective distance)

2. Distance to stop sign

3. Road gradient in percent

4. Average speed in mph

a. Automobiles

b. heavy trucks - uphill

c. heavy trucks - downhill

5. 24 hour average number of automobiles and medium trucks in both directions (ADT)

a. automobiles

b. medium trucks

c. effective ADT ($a + (10 \times b)$)

6. 24 hour average number of heavy trucks

a. uphill

b. downhill

c. total

7. Fraction of nighttime traffic (10:00 p.m. to 7: a.m.)

8. Traffic projected for what year?

Adjustments for Automobile Traffic

	9 Stop and-go Table 3	10 Average Speed Table 4	11 Night- Time Table 5	12 Auto ADT (line 5c)	13 Adjusted Auto ADT	14 DNL (Workchart 1)	15 Barrier Attenuation	16 Partial DNL
Road No. 1	_____ X _____	X _____	X _____	X _____	= _____	_____	- _____	= _____
Road No. 2	_____ X _____	X _____	X _____	X _____	= _____	_____	- _____	= _____
Road No. 3	_____ X _____	X _____	X _____	X _____	= _____	_____	- _____	= _____
Road No. 4	_____ X _____	X _____	X _____	X _____	= _____	_____	- _____	= _____

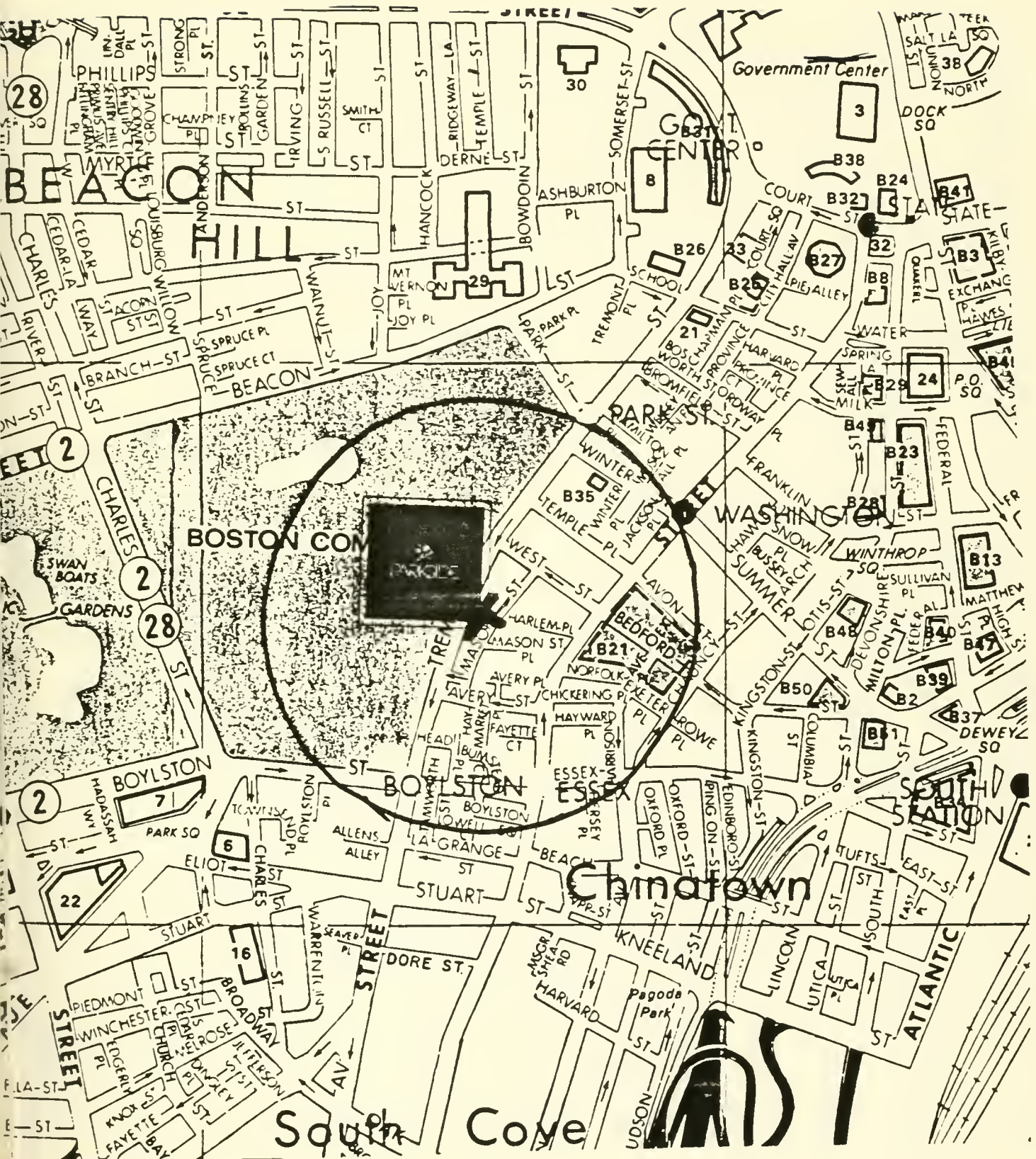
Adjustments for Heavy Truck Traffic

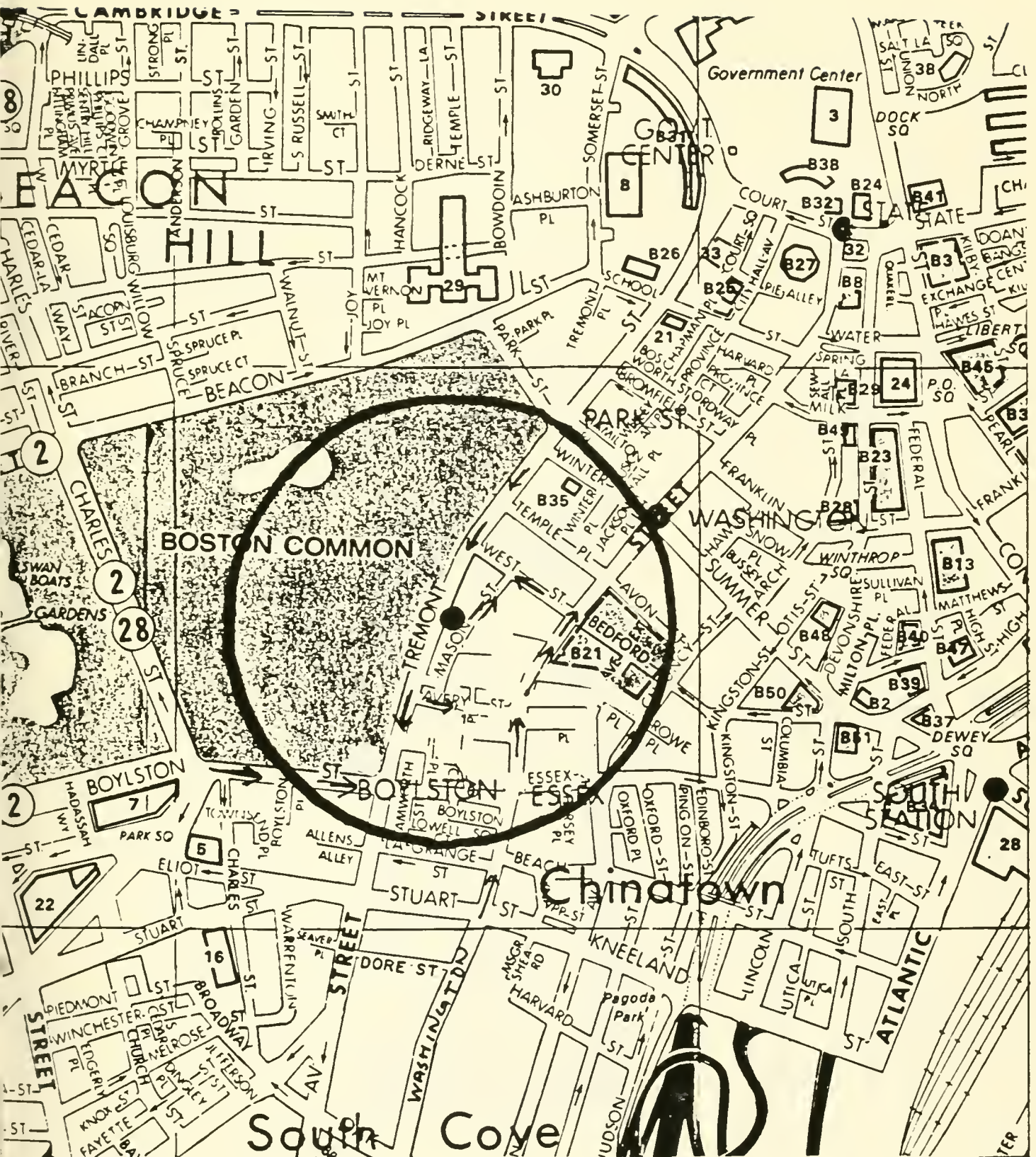
	17 Gradient Table 6	18 Average Speed Table 7	19 Truck ADT 2	20	21	22 Stop and-go Table 8	23 Night- Time Table 5	24 Adjusted Truck ADT	25 DNL (Work chart 2)	26 Barrier Attn.	27 Partial DNL
-Uphill	_____ X _____	X _____									
Road No. 1				Add _____	X _____	X _____		= _____	_____	- _____	= _____
-Downhill	_____ X _____										
-Uphill	_____ X _____	X _____									
Road No. 2				Add _____	X _____	X _____		= _____	_____	- _____	= _____
-Downhill	_____ X _____										
-Uphill	_____ X _____	X _____									
Road No. 3				Add _____	X _____	X _____		= _____	_____	- _____	= _____
-Downhill	_____ X _____										
-Uphill	_____ X _____	X _____									
Road No. 4				Add _____	X _____	X _____		= _____	_____	- _____	= _____
-Downhill	_____ X _____										

Combined Automobile & Heavy Truck DNL

Road No. 1 _____ Road No. 2 _____ Road No. 3 _____ Road No. 4 _____ Total DNL for All Roads _____

Signature _____ Date _____





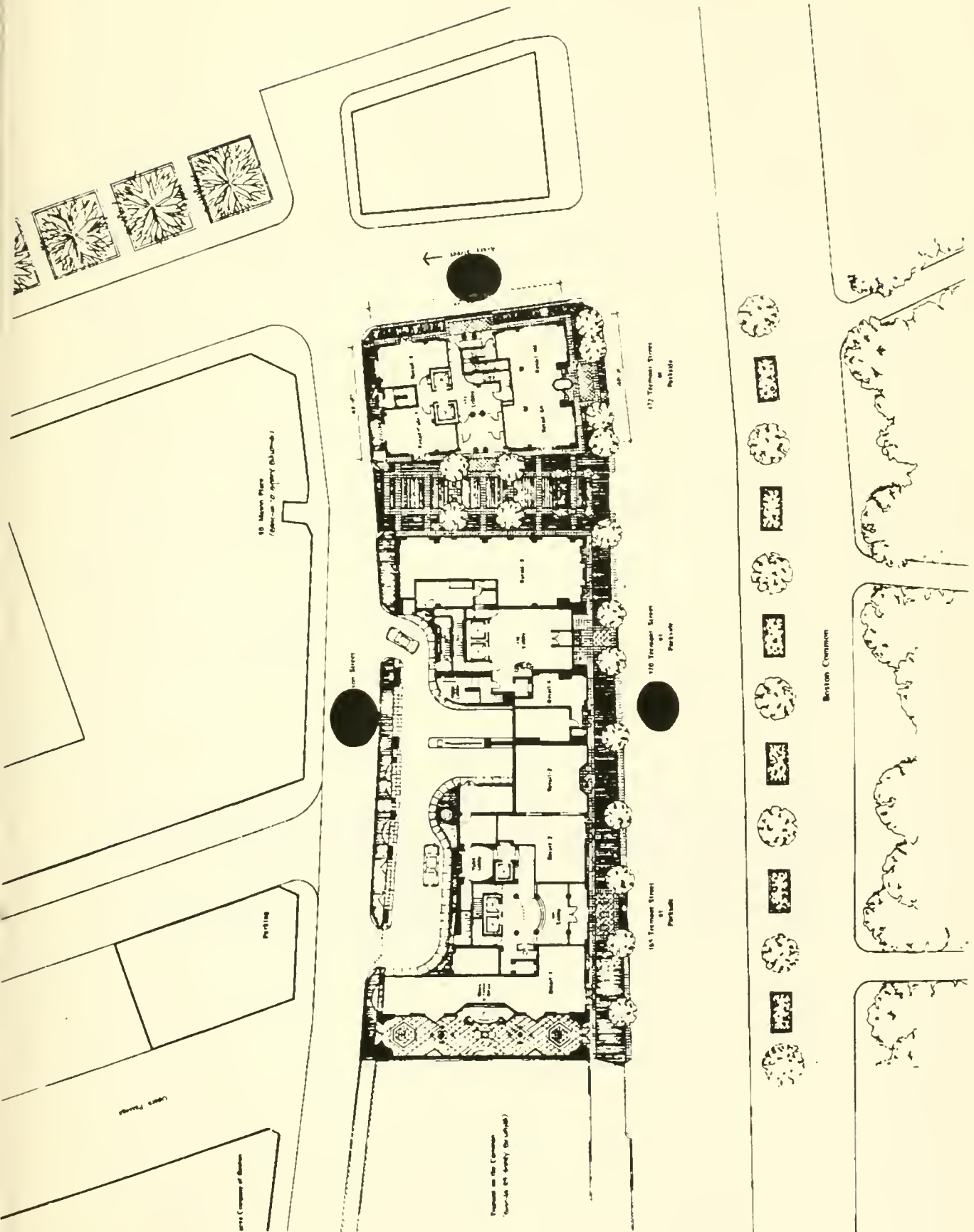


Exhibit 5

Traffic Composition*

Vehicle Classification -----	As % of Total Vehicles -----
Automobile**	
Passenger	71.5%
Taxi	15.2%
Light truck/pick-up single rear tires and axle	4.2%
Medium truck - dual rear tires/single rear axle	4.1%
Heavy Truck**	
Heavy truck/semi-trailer dual rear axles	.8%
Bus	4.2%

* Traffic Composition derived from Intersection Turning Movement Count conducted by Traffic Control Systems for City of Boston, at Tremont and Winter Streets 6/80.

** Vehicle classification as defined by HUD Noise Assessment Guidelines.

Exhibit 6

Automobile Traffic Worksheet

Roadway	Traffic Count (Actual)	Projected Count 1988*	(A) Autos	(B) Medium Trucks	(C) Heavy Trucks	(C) Effective Auto ADT	(D) Average Speed Adjustment Factor	(E) Adjusted Auto ADT	(F) Noise Assessment Location	(G) Decibel Noise Level (DNL)
Tremont Street	12118	20000	18200	820	1000	26400	0.21	5544	NAL 1 - 28.5'	69
Avery Street	554	860	782	35	43	1132	0.21	238	NAL 2 - 20'	Adjusted ADT less than 1000 vehicles
West Street	2876	3940	3585	162	197	5205	0.21	1093	NAL - @250'	Less than 55
Washington Street		6000	5460	246	300	7920	0.21	1663	NAL 3 - @400'	Less than 55

*

Based on 6.5% annual growth rate

- (A): Exhibit 5 - Traffic Composition
- (B): Exhibit 5 - Traffic Composition
- (C): Exhibit 1 - Page 6 {C= (A) + 10(B)}
- (D): Exhibit 1 - Page 7, Table 4
- (E): (C)x(D)
- (F): Exhibit 1 - Page 6: Distance of NAL to assessed roadway
- (G): Exhibit 1 - Worksheet 1

Exhibit 7

Heavy Truck Traffic Worksheet

Roadway	Traffic Count Actual	Projected Count 1988*	(A) Truck ADT	(B) Average Speed Adjustment Factor	(C) Nighttime Adjustment Factor	(D) Adjusted Truck ADT	(E) Noise Assessment Location	(F) Decibel Noise Level (DNL)
Tremont Street	12118	20000	1000	0.81	0.46	373	NAL 1 - 28.5'	73
Avery Street	554	860	43	0.81	0.46	16	NAL 2 - 20'	Adjusted ADT less than 100
West Street	2876	3940	197	0.81	0.46	73	NAL 3 - @250'	Adjusted ADT less than 100
Washington Street		6000	300	0.81	0.46	112	NAL 3 - @400'	Less than 55

*
Based on 6.5% annual growth rate
(A): Exhibit 5 - Traffic Composition and Exhibit 1
(B): Exhibit 1 - Page 9, Table 7
(C): Exhibit 1 - Page 8, Table 5
(D): (A)(B)(C)
(E): Exhibit 1 - Page 6, Distance of NAL to assessed roadway
(F): Exhibit 1 - Worksheet 2

A D D E N D A

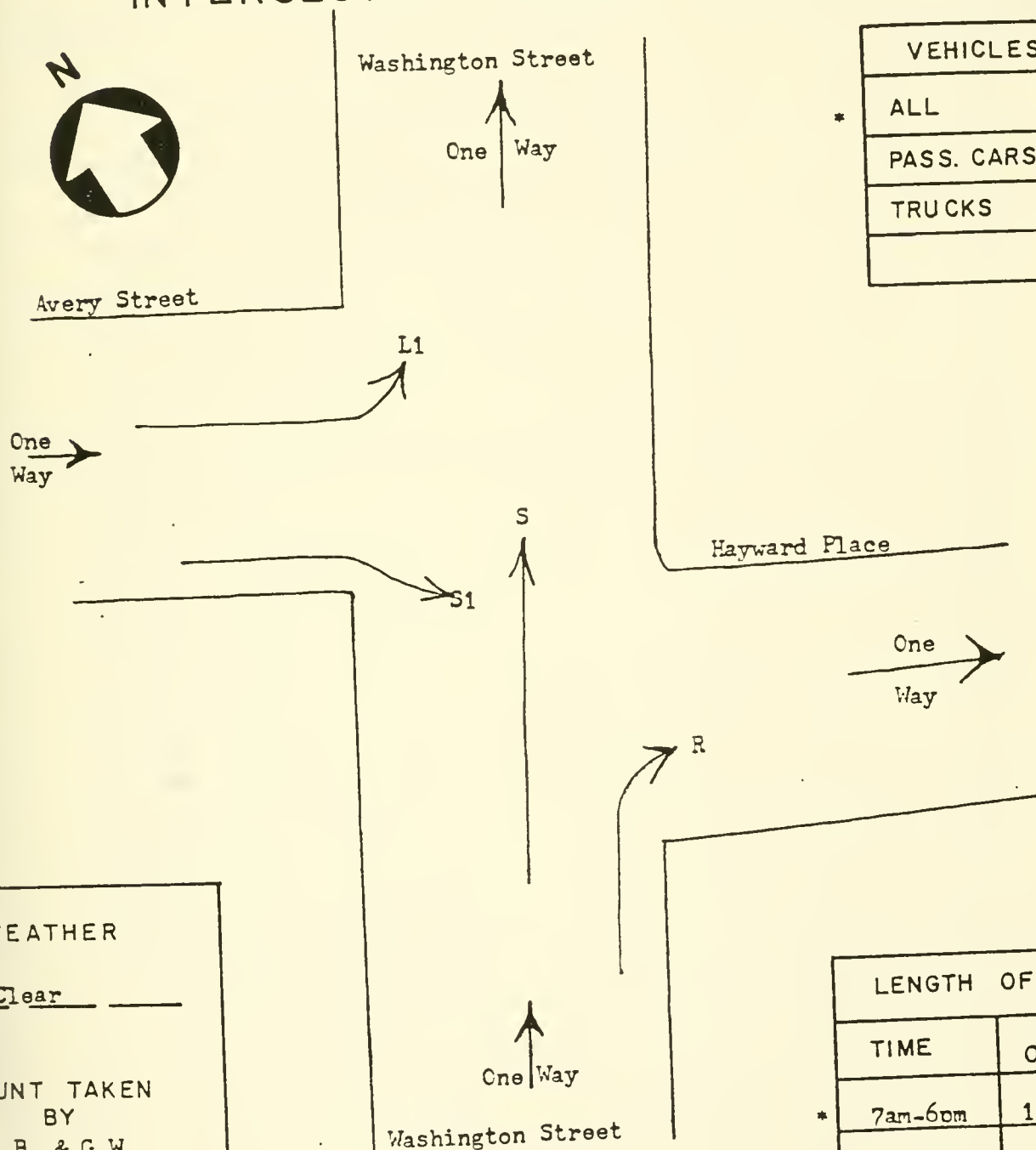
PROJECT NO. 345

CITY Boston Proper
 INTERSECTION Avery St., Hayward Pl. & Washington Street
 DATE 1/30/81 DAY OF WEEK Friday

INTERSECTION TURNING MOVEMENT COUNT

#13

VEHICLES COUNTED	
ALL	X
PASS. CARS	
TRUCKS	(X)



WEATHER

Clear

COUNT TAKEN BY
D.B. & G.W.

LENGTH OF COUNT	
TIME	NUMBER OF HOURS
7am-6pm	11 Hours

STREET		ENTERING VOLUME	FLOW PERCENT
Washington Street	NB	4260	90.2
Avery Street	EB	462	9.8

COMMENTS

TRAFFIC MOVEMENT SUMMARY TABLE

LOCATION Avery St., Hayward Pl. & Washington St. CITY OR TOWN Boston Proper
 DATE 1/30/81 DAY OF WEEK Friday WEATHER Clear RECORDER D.B. & G.W.
#18

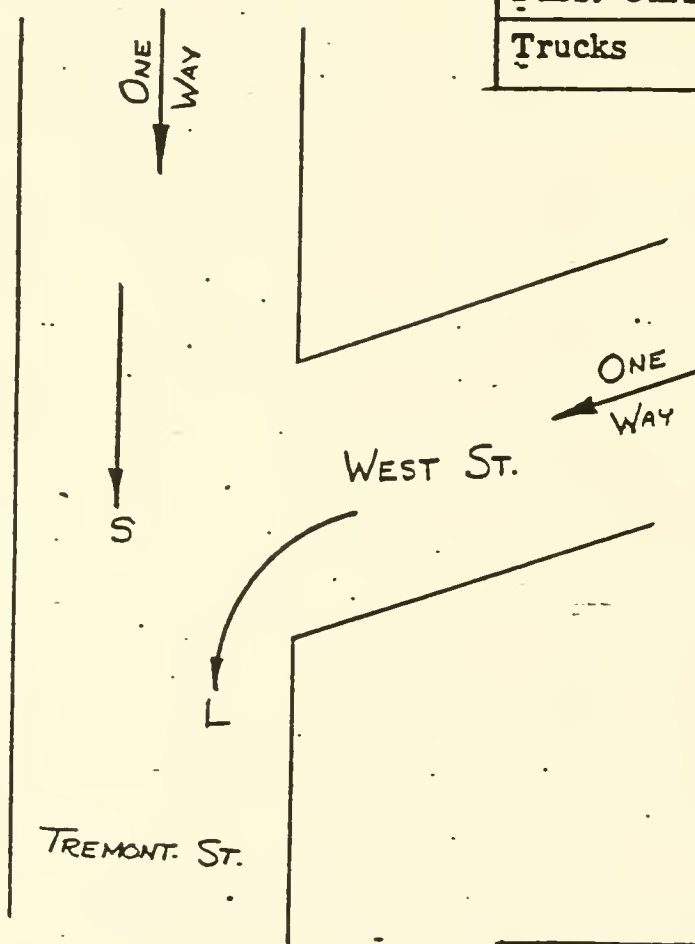
TIME STARTS ENDS M	Washington St. Northbound			Avery St. Eastbound								TOTAL HALF HOUR TALLY
		S	R	L1	S1							
00-7:30		60	38	8	7							113
30-8:00		101	26	10	0							137
00-8:30		118	30	6	2							156
30-9:00		166	41	7	3							217
00-9:30		185	53	10	2							250
30-10:00		174	51	13	0							238
00-10:30		153	29	10	0							192
30-11:00		186	31	35	0							252
00-11:30		166	33	25	0							224
30-12:00		156	28	18	1							203
00-12:30		182	31	15	0							228
30-1:00		164	30	13	0							207
00-1:30		189	35	17	6							247
30-2:00		175	34	19	9							237
00-2:30		174	26	24	5							229
30-3:00		145	18	21	12							196
00-3:30		134	32	26	15							207
30-4:00		177	31	17	8							233
00-4:30		201	42	22	11							276
30-5:00		179	34	5	7							225
00-5:30		188	27	20	9							244
30-6:00		161	26	17	7							211
00-6:30												
30-7:00												
00-7:30												
30-8:00												
00-8:30												
30-9:00												
00-9:30												
30-10:00												
00-10:30												
30-11:00												
TOTAL		3534	726	358	104							GRAND TOTAL
TOTAL		1110		110								4726

City Boston - Proper
Intersection Tremont St. & West St.

INT. NO. 4 (BTPD #5)

Date 11/23/82 Day of Week Tuesday

INTERSECTION TURNING MOVEMENT COUNT



Vehicles Counted	
All	X
Pass. Cars	
Trucks	(X)

Weather
Overcast

Count Taken
By
PAT DOWNEY

Length of Count	
Time	Number of Hours
7:00 AM	
6:00 PM	11 HR

Street	Entering Volume	Flow Percent	Comments
TREMONT ST.	9899	80.5%	
WEST ST.	2397	19.5%	
Total	12,296	100.0%	

Location Tremont St. & West St. City or Town Boston

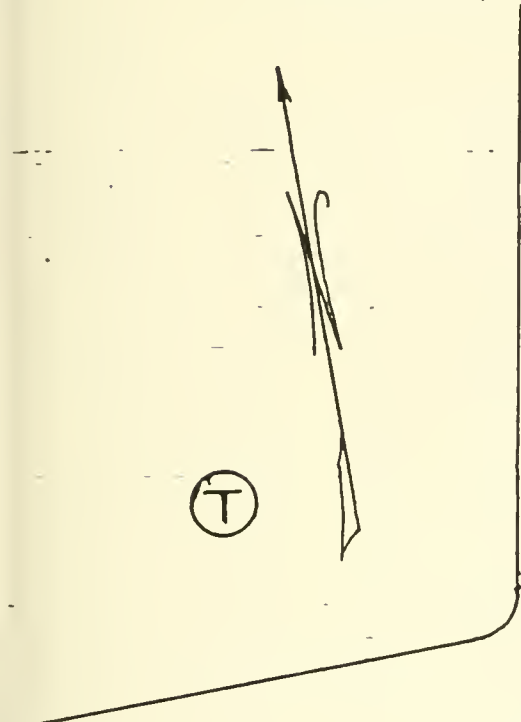
Date 11/23/82 Day of Week Tues Weather ^{over}cast Recorder J.D.

[illegible]

NT. NO.

INTERSECTION: Washington Essex & Boylston
City Proper
 DATE 3/31/88-4/1/88 DAY OF WEEK Th/Fr

INTERSECTION TURNING MOVEMENT COUNT #88202



VEHICLES COUNTED	
ALL	X
PASS. CARS	
TRUCKS	(X)

600 WASH.

WASHINGTON ST

#17

IL
IS

BOYLSTON ST

WEATHER
FAIR

COUNT TAKEN BY
Len Casey

2S
2R

LENGTH OF COUNT	
TIME	NUMBER OF HOURS
7AM - 6PM	11

ESSEX ST

WASHINGTON ST

STREET	ENTERING VOLUME	FLOW PERCENT	COMMENTS			
1) Boylston St E.B.	7137	52.75				
2) Washington St NB	6393	47.25				
TOTAL	13530	100.00				

TRAFFIC MOVEMENT SUMMARY TABLE

STATION Washington, Boylston & Essex Sts - CITY OR TOWN City Proper -
 DATE March 3 / April 1 / 1888 DAY OF WEEK Thurs / Fri WEATHER fair - RECORDER Leo Casey
 88202 ✓

[illegible]



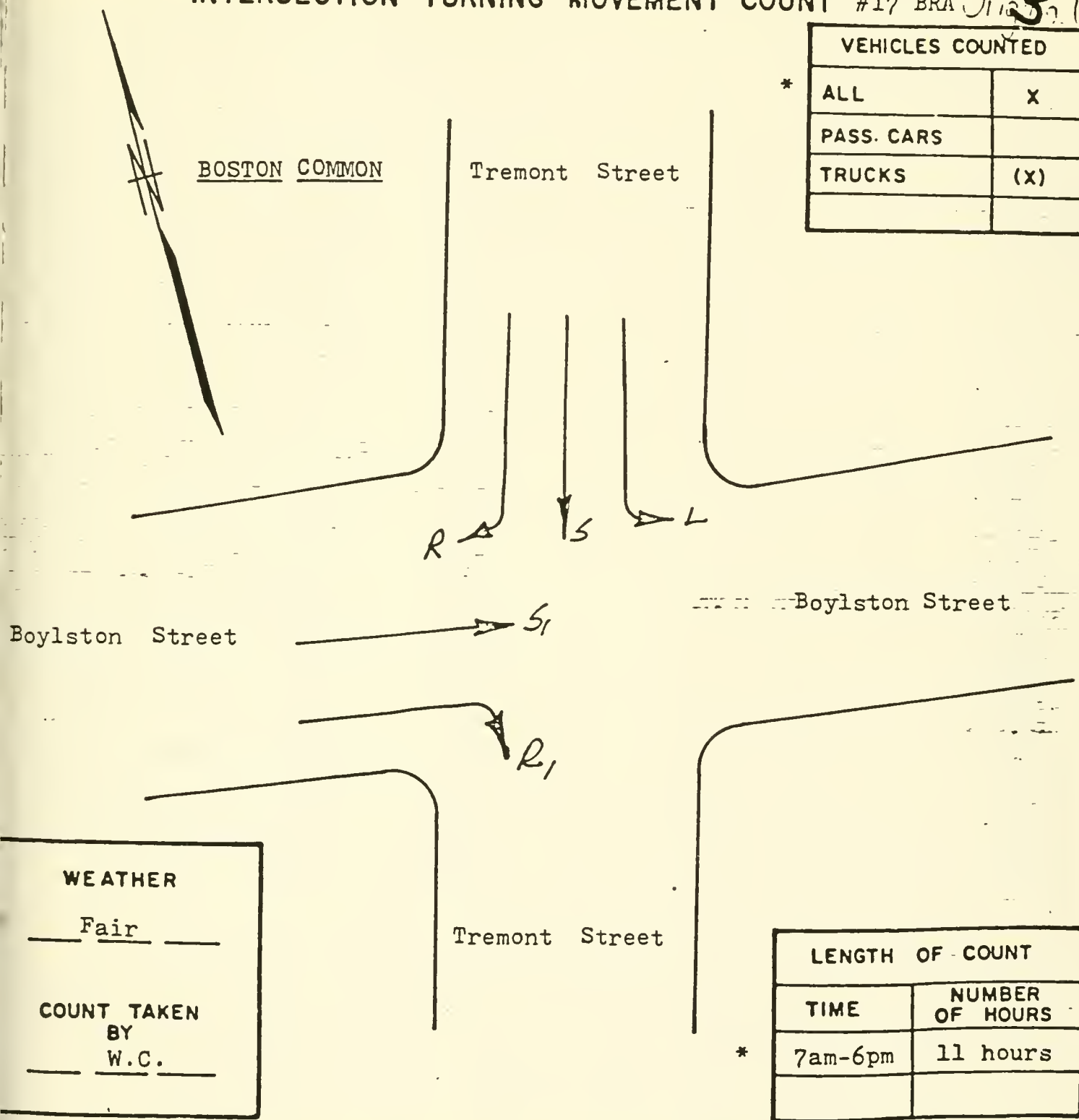
INT. NO. *

* 7/25&26/79

CITY Boston Proper
 INTERSECTION Boylston Street &
Tremont Street
 DATE * DAY OF WEEK Wed-Thur

INTERSECTION TURNING MOVEMENT COUNT #17 BRA 010301

VEHICLES COUNTED	
* ALL	X
PASS. CARS	
TRUCKS	(X)



LENGTH OF COUNT	
TIME	NUMBER OF HOURS
* 7am-6pm	11 hours

STREET		ENTERING VOLUME	FLOW PERCENT	COMMENTS			
Tremont St.	SB	10538	63				
Boylston St.	EB	6187	37				

TRAFFIC MOVEMENT SUMMARY TABLE

LOCATION Boylston Street & Tremont Street CITY OR TOWN Boston Proper
 DATE 7/26&27/79 DAY OF WEEK Wed-Thur WEATHER Fair RECORDER W.C.

TIME ARTS - M	Tremont Street			Boylston St.										TOTAL HALF HOURLY TALLY
	Southbound			Eastbound										
	L	S	R	S,		R,								
0-7:30	50	211	58	118		46								
0-8:00	40	210	62	136		46							483	
0-8:30	72	334	102	250		96							494	
0-9:00	86	290	111	268		73							854	
0-9:30	94	312	132	295		90							828	
0-10:00	98	257	118	276		92							923	
0-10:30	65	224	92	179		67							841	
0-11:00	79	209	107	224		54							627	
-11:30	51	229	113	178		66							673	
-12:00	74	281	157	177		52							637	
-12:30	86	264	142	226		78							741	
-1:00	76	192	121	163		54							796	
1:30	87	256	138	197		66							606	
2:00	79	261	168	226		78							744	
2:30	88	301	167	214		70							812	
3:00	91	292	155	228		52							840	
3:30	86	336	199	254		101							818	
4:00	80	321	161	228		81							976	
4:30	82	316	149	229		78							871	
5:00	60	261	126	174		55							854	
5:30	58	319	142	212		63							676	
6:00	59	343	152	208		69							794	
6:30													237	
7:00														
7:30														
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22:30														
23:00														
23:30														
L	1641	6019	2878	4643		1527							GRAND TOTAL	
	10,538			6187									16,725	

Exhibit D

II. ENVIRONMENTAL PROTECTION COMPONENT

(D) Construction Impact

The goal of the trash disposal plan is twofold: to minimize its impact on traffic flow during construction, and to assure that trash removal is not disruptive to abutters.

During the commencement of construction of 170 Tremont, the developer received some complaints concerning trash disposal. Its immediate response to the situation and implementation of a trash removal schedule has eliminated further disruption to resident abutters. Moreover, the developer actively promotes ongoing dialogue with residents in order to minimize problems on an individual basis. Presently, trash removal at the 170 Parkside site occurs during non-peak, daylight hours. It is anticipated that a similar plan will be implemented during the construction of 165 Tremont.

Once 165 Tremont is occupied, the developer is considering the feasibility of scheduling pick-up between the hours of 10:00 a.m. and 3:00 p.m. on weekdays only and the possibility of hiring the same trash removal contractor employed by Tremont-on-the-Common in order to minimize the number and frequency of removals on Mason Street.

Exhibit E

165 and 172 Tremont
Evaluation of Ambient Air Quality

Introduction

This report evaluates the results of an analysis of the effect that traffic generated by 165 and 172 Tremont Streets (the proposed Parkside East and Parkside at Mason Place projects) may pose to existing ambient air quality.

The goal of this study is to assess whether traffic generated by the proposed projects is sufficient to cause a change in the existing Levels of Service, i.e., the average delay experienced for each individual approach to an intersection (see Exhibit 1), at intersections within the assessment area.

Exhibits 2 and 3 identify the location of the proposed Parkside projects situated in the block bounded by Tremont, Avery, Mason and West Streets, and the circulation patterns of nearby roadways.

Conclusions

This study assessed the impact of traffic generated by Parkside East and Parkside at Mason Place. Of the estimated 150 vehicle trips generated daily at the Parkside site, 31% occur during each of the peak AM and PM periods (7:00-9:00

a.m. and 4:00-6:00 p.m., respectively). This is equivalent to 23 vehicle trips for each hour of peak traffic.

Exhibit 4 suggests that while traffic generated by Parkside increases at a very modest rate, that increase is sufficiently low so as to have no affect to existing Levels of Service. With levels of service unaffected, it can be inferred that existing concentrations of carbon monoxide and hydrocarbons, as those levels are defined by the National Ambient Air Quality Standards, will be likewise unaffected by traffic generated from the proposed projects.

Assessment Area

For purposes of this evaluation, HMM Associates, in its "Responses to BTB Comments," (contained in the Supplement to the 165 Draft Project Impact Report), assumes that "...all site-generated traffic must use Tremont Street, and that all trips will pass through the Tremont Street/Boylston Street intersection." Based on that study, at this intersection, 40% of Parkside-generated traffic will turn west onto Boylston Street; 10% will continue across Boylston on Tremont, and the remaining 50% will turn east toward Washington/Essex Streets.

Boylston/Essex Washington Streets

During the two-hour peak AM period, (see Exhibit 4) 23 vehicles (11.5 per peak hour period) will enter this intersection from the Parkside site. This represents an increase of 4.8% in traffic volume, but only 3% of reserved

capacity. Consequently, it does not affect a change to the existing LOS B designation at the intersection.

West/Tremont Street

All vehicles egressing the Parkside site must do so at West and Tremont Street, an intersection with an existing LOS B. The impact of 23 additional vehicles (per peak one-hour period) is also well within the intersection's reserve capacity. LOS B can be expected to remain unchanged.

Boylston/Tremont Street

While this intersection, at LOS C, is presently at the mid-range of the service-level designation, an increase of 46 vehicles per two-hour peak period reflects a 2.8% increase in traffic volume and constitutes only 9% of reserved capacity. At this rate, Parkside-generated traffic would not cause a change in the existing LOS.

At the Kneeland/Washington Street intersection, with an existing LOS E, the impact of 5 Parkside-generated vehicles (or 2.5 for each AM peak hour) would represent only 5% of reserved capacity.

Mitigation Efforts

The developers of Parkside have implemented the following plans to mitigate any potential for impacting existing ambient air quality levels:

- (1) There is no parking provision for commercial users or shoppers.

- (2) The nature of the proposed retail shops is such that clientele will consist most likely of Parkside residents or shoppers already in the area. Thus, retail use of the ground levels will not generate increased vehicular traffic.
- (3) The purchase price for residential parking spaces discourages car ownership.
- (4) The provision of on-call car rental services serves as a disincentive to car ownership.
- (5) Access and egress to the parking garage, provided by the porte-cochere off of Mason Street, will accommodate 11 vehicles, and will prevent vehicles from queuing onto Mason Street. This design element will reduce the likelihood that traffic flow and speeds along that street will be significantly reduced.

Exhibit 1

LEVEL OF SERVICE (LOS) DESIGNATIONS*

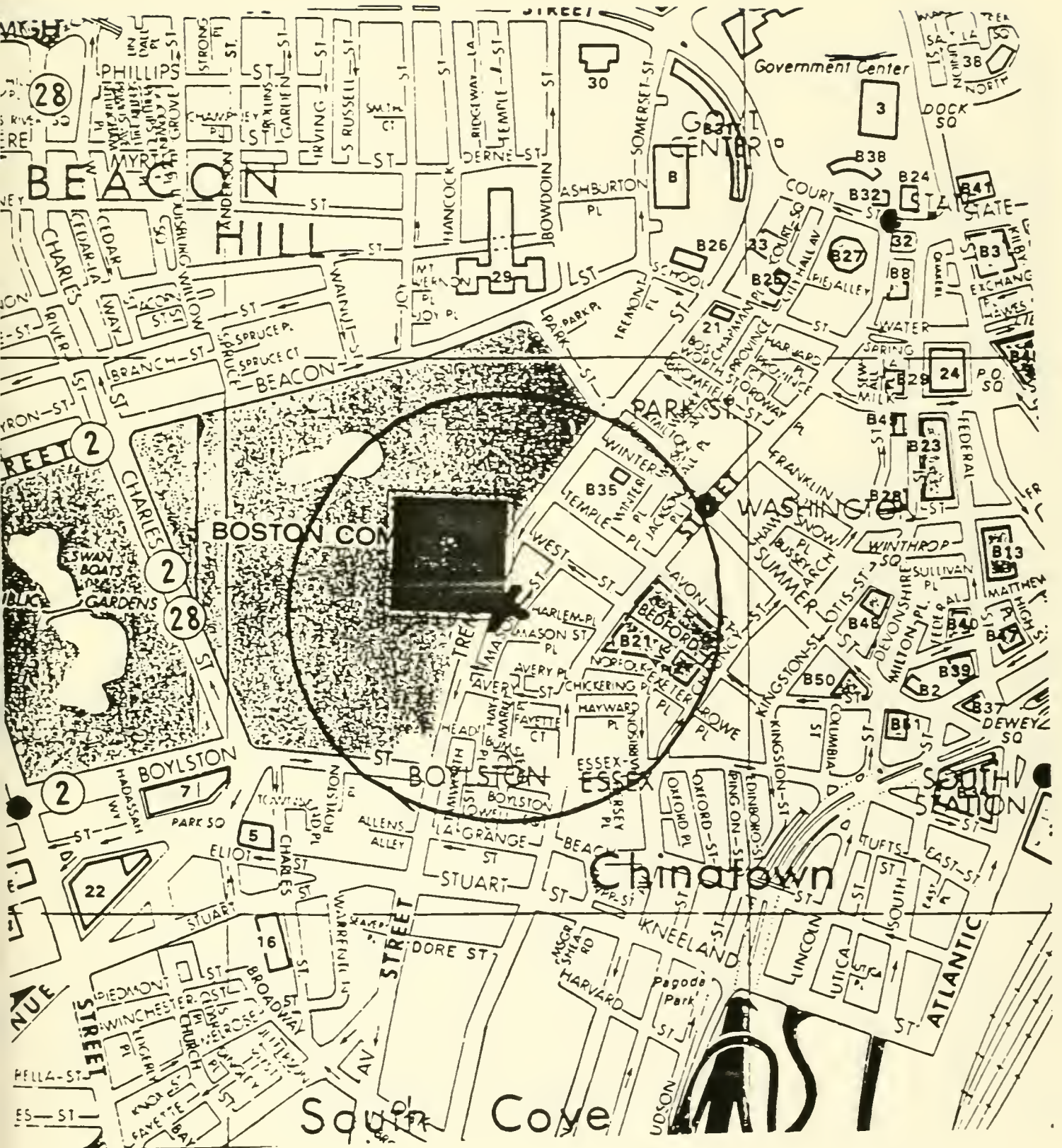
<u>Category</u>	<u>Description</u>	<u>Delay Range** (Seconds per vehicle)</u>	<u>Reserve*** Capacity (Vehicles Per Hour)</u>
LOS A:	Describes a condition of free flow, with low volumes and relatively high speeds. There is little or no reduction in maneuverability due to the presence of other vehicles, and drivers can maintain their desired speeds with little or no delay.	0.00-0.50	400
LOS B:	Describes a condition of stable flow, with desired operating speeds relatively unaffected, but with a slight deterioration of maneuverability within the traffic stream.	5.1-15.0	300-399
LOS C:	Describes a condition still representing stable flow, but speeds and maneuverability begin to be restricted. The general level of comfort begins to deteriorate noticeably at this level.	15.1-25.0	200-299
LOS D:	Describes a high-density traffic condition approaching unstable flow. Speeds and maneuverability become more seriously restricted, and the driver experiences a poor level of comfort.	25.1-40.0	100-199
LOS E:	Represents conditions at or near the capacity of the facility. Flow is usually unstable, and freedom to maneuver within the traffic stream becomes extremely difficult.	40.1-60.0	0-99
LOS F:	Describes forced flow or breakdown conditions with queuing along critical approaches. Operating conditions are highly unstable as characterized by erratic vehicle movements along each approach.	60.1 or greater	N/A

* Source: Transportation Research Board, Highway Capacity Manual, Special Report 209, 1985.

** Delay ranges relate to the mean stopped delay incurred by all vehicles entering the intersection and do not consider the effects of traffic signal coordination. This criteria is intended for use in the evaluation of signalized intersections.

*** Reserve capacity refers to the unused capacity of the minor approach, on a per lane basis. This criteria is limited to use in the evaluation of unsignalized intersections.





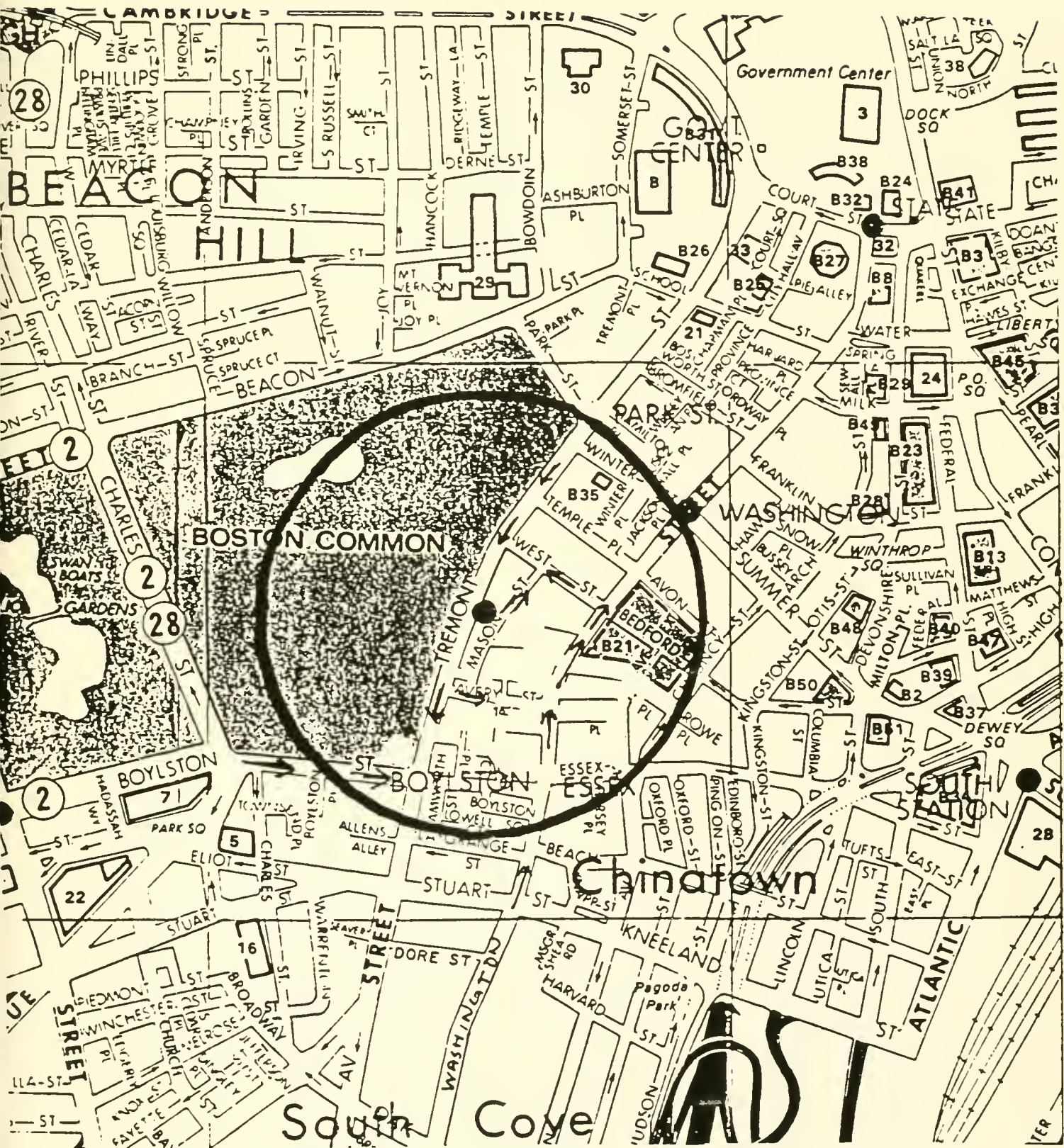


Exhibit 4

Peak-Hour Traffic Volume*

Intersection	Peak Hour	(A) Existing Total Entering Volume	(B) With Parkside Total Entering Volume	(C) Existing LOS	(D) Reserve Capacity Vehicles PER HOUR**	(E) Parkside-Generated Traffic As % of Average LOS PER HOUR
Boylston St./ Tremont St.	AM	1629	1675	C	200 - 299	9%
Boylston/Essex Washington St.	AM	478	501	B	300 - 399	3%
West St./ Tremont St.	AM	296	342	B	300 - 399	6%
Avery St./ Tremont St.	PM	65	111	A	400	5%

*
PEAK HOUR AM: 7:00 - 9:00 A.M.
PEAK HOUR PM: 4:00 - 6:00 P.M.

**
This represents capacity on a per hour (not Peak Hour) basis.

(A) Volume estimates are derived from Noise Assessment (see Supplement to DPIR). Peak rates are established using Tremont Street rate -- peak/total average daily traffic -- (.075)

(B) Based on estimates provided in HMM Associates' "Response to BID Comments" (see Supplement to DPIR).

(C) See Exhibit 1.

(D) See Exhibit 1.

(E) Change in (A) and (B)/2 divided by average of D.

Preliminary Adequacy Determination
31 May 1988

III. URBAN DESIGN COMPONENT

The sheets of drawings included in Exhibit 5 of the DPIR satisfy the requirements of the Scoping Determination and are adequate to enable the Authority to begin the review of Schematic Design.

IV. HISTORIC RESOURCES

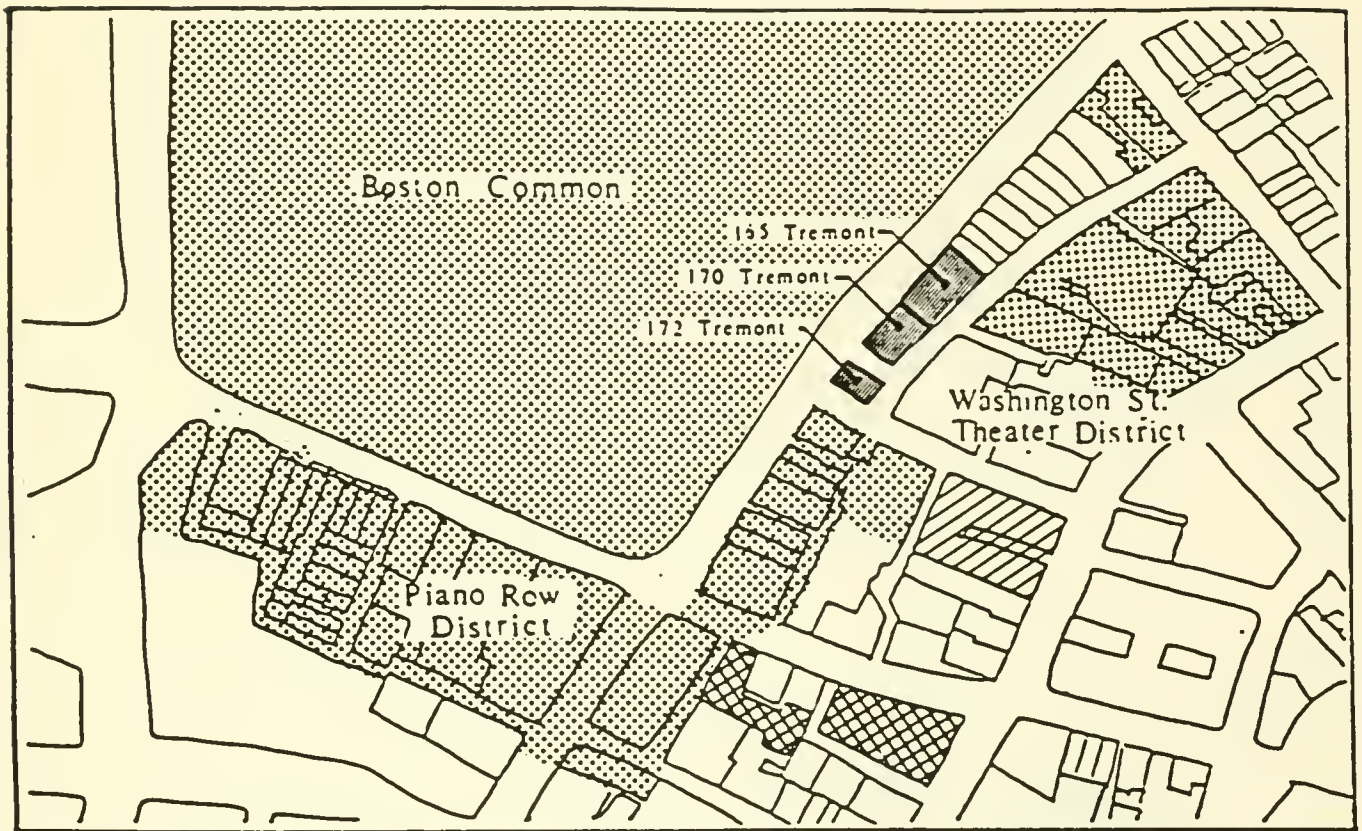
Preliminary Adequacy Determination
31 May 1988

IV. HISTORIC RESOURCES COMPONENT

As per comments from the Boston Landmarks Commission, the following technical changes should be made in the FPIR:

- (1) Historical Designation Plan: The Boston Common, Boylston Building, and YMCU building are also listed in the National Register (as well as being Boston Landmarks).
- (2) Historic District Disposition Plan: Both the Piano Row District and the West Street District are listed in the National Register; they are not suggested for designation.

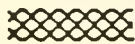
Exhibit A



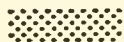
Historical Landmarks



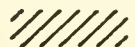
Project Site Location



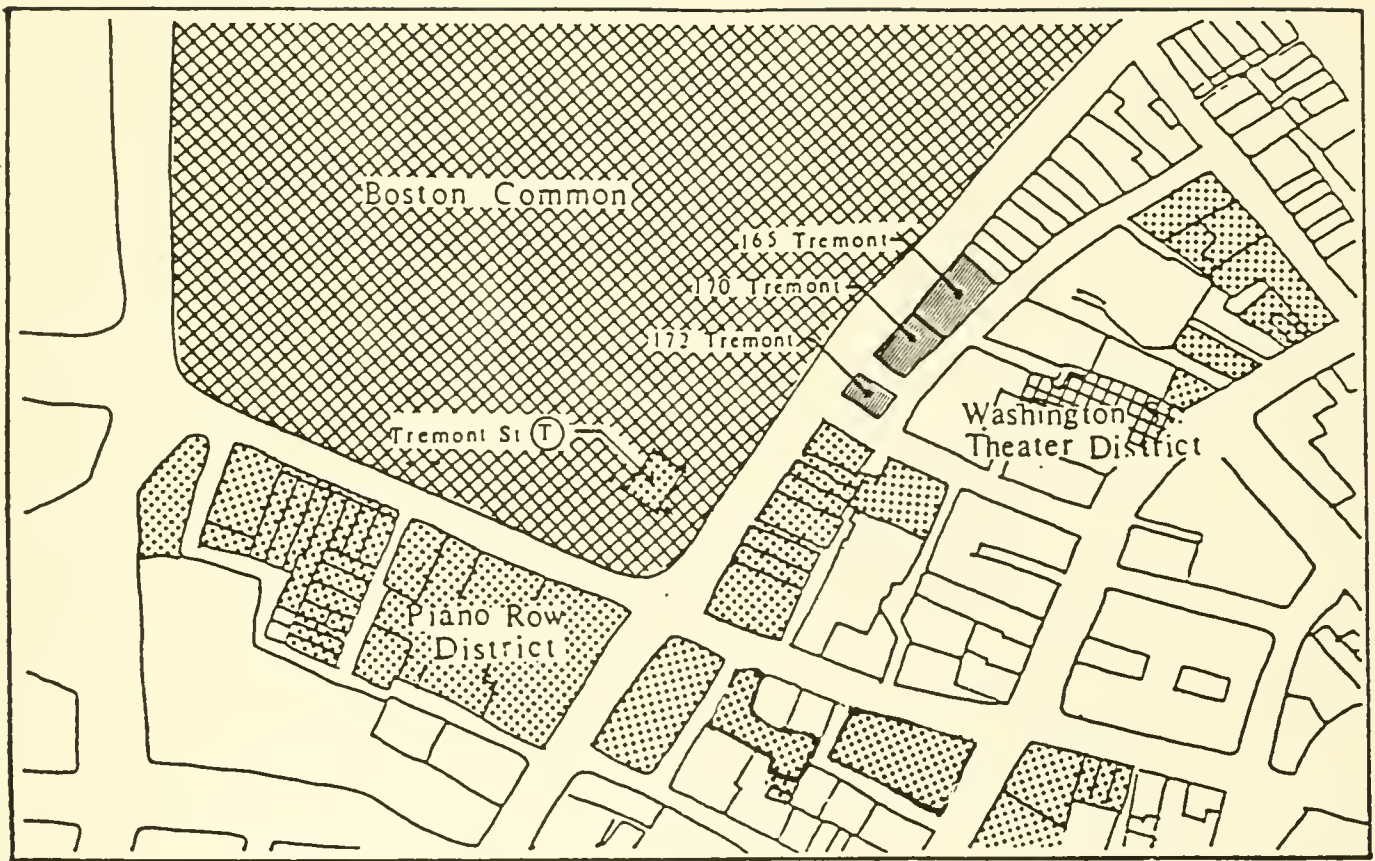
Present Boston City Landmark and Suggested Individual National Register



Present National Register District



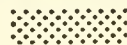
Suggested Individual National Register



Historical Designation : Individual Site / Building



Project Site Location



National / Massachusetts Register



Boston Landmark

V. INFRASTRUCTURE SYSTEMS

Preliminary Adequacy Determination
31 May 1988

V. INFRASTRUCTURE SYSTEMS

The Scoping Determination for the DPIR required an Infrastructure Report describing the project's impact on water, sewer, and privat utilities, specific utility relocation issues, scheduling, and mitigation measures. No infrastructure report was included in the DPIR nor was there any mention made of infrastructure impact, save for a brief mention that no infrastructure relocation would be required contained in the construction impacts section. Therefore, the Infrastructure Systems component is insufficient.

In order to comply with the Scoping Determination, the demands of the project on infrastructure services should be assessed to ensure that the proposed density conforms to the interim zoning planning objectives.

V. INFRASTRUCTURE SYSTEMS COMPONENT

- (1) Refer here to Exhibit A which is a compilation of letters received from all utilities concerning the possible impacts of the Project upon infrastructure capacity. Any concerns raised in this correspondence about the impact of the Project upon the infrastructure system have been addressed below.
- (2) (a) Boston Water & Sewer Commission. The East Side Interceptor is scheduled for completion in the Spring of 1990. Full occupancy for all three buildings is scheduled to be reached by the end of 1990. It is not, therefore, expected that the Project sewage loads will exceed or even reach pre-existing loads at the site handled by the current system. However, should the East Side Interceptor not be completed according to schedule, the Developer has agreed to control the sewage loads generated by the entire Parkside Project through the furnishing and the installation of a temporary sewage holding tank. Please note the attached correspondence from the Developer to the Boston Water and Sewer Commission dated August 24, 1987, which requests a waiver of the requirement for installation of a permanent sewage holding tank. The Boston Water and Sewer Commission's response dated September 2, 1987, is also attached. The Developer intends to keep the Boston Water and Sewer Commission fully apprised of the progress of construction and conclude this matter to the Commission's satisfaction.
- (b) Boston Edison. Refer to the attached Boston Edison letter dated April 29, 1988. Boston Edison has reviewed the Project's design development plans and determined that the Project's loads upon their system pose no problem.

- (c) New England Telephone. Refer to the attached New England Telephone correspondence dated June 7, 1988, indicating that adequate telephone service will be provided to the Project.
 - (d) Boston Fire Department. Please refer to the attached new construction permit issued on June 20, 1988, by the Boston Fire Department.
 - (e) Boston Gas. Please refer to the attached Boston Gas letter dated June 15, 1988, which reports that gas availability for the Project is adequate.
 - (f) Public Improvements Commission. The Developer intends to have submitted an application for the discontinuance of those portions of Mason Street and Tremont Street affected by the Project to the Public Improvements Commission no later than August 15, 1988. Please refer to Exhibit B which show the engineer's plans of discontinuance. The Developer of 170 Tremont Street has already been granted the discontinuance of Mason Place and has purchased the discontinued property from the City of Boston (note the attached ruling from the Public Improvements Commission dated February 5, 1987, and the deed which conveys the title of the discontinued property from the City of Boston to the Developer dated April 8, 1987).
- (3) The attached Compiled Utility Plan, dated April 21, 1987 (Revision 14), indicates the approved locations for all utilities along Mason Place and within the garage area of 170 Tremont Street. This utility relocation plan was accepted by the Public Improvements Commission on November 6, 1986, as part of that Commission's recommendation to the City of Boston that the City-owned land required for the successful development of the Project be discontinued and sold to the Developer. Again, please refer to the attached copy of the ruling made by the Public Improvements Commission. Regarding the proposed construction through Mason Place and its possible effect upon utility lines, please refer to Exhibit C which contains correspondence from those utilities with facilities or proposed facilities in Mason Place.

- (4) The fire pump, which will be located in the basement of the proposed development at 172 Tremont Street and which will service 165, 170 and 172 Tremont Street, will be designed to adequately bear the loads presented by the three structures. The fire pump is scheduled to be fully installed and entirely operative by December of 1988, at which time it will be servicing 170 Tremont Street. By March of 1989, it is anticipated that the pump will serve the proposed 172 Tremont Street, and by November of 1989, the pump will also service the structure at 165 Tremont Street.
- (5) The proposed development is expected to have no impact upon utility services which will require public investment, nor will there arise from the progress of this development the need for any upgrading of the public ways.

Exhibit A

100
3.540



24 August 1987

Water and Sewer Commission
10 Post Office Square
Boston, Massachusetts 02109

Attn: John P. Sullivan, Director of Engineering

RE: Parkside West
Sewage Holding Tank

Dear Mr. Sullivan:

Pursuant to our continuing correspondence and discussions with Ed Duggan of your office regarding our request to eliminate the sewage holding tank from referenced Project, we wish to modify our request as follows.

As construction on the East Side Interceptor is scheduled for completion at or near the estimated time of occupancy for Parkside West, we would request that we meet approximately six months prior to occupancy of Parkside West to review the status of construction and estimated date of operation for the Interceptor. Our present schedule calls for this meeting to be held in September 1988. At that time, if we can agree that the sewage occupancy demand for the building would not exceed the previous volume in advance of the Interceptor becoming operational, you would not require the construction of a sewage holding tank. Should it be determined however that we will exceed the preexisting load on the system, we would be required to construct a temporary sewage holding at some location on the Parkside site which could include a remote, at grade tank on the Parkside East site, to service the Parkside buildings until such time as the East Side Interceptor is operational. Upon completion of the Interceptor, we would be allowed to disconnect and remove the temporary tank.

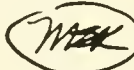
Parkside West
Sewage Holding Tank

24 August 1987
Page 2

If this is consistent with your understanding of our agreement, please indicate your acceptance of our proposal below.

Again, we appreciate the cooperation we have received from you and Ed Duggan regarding this matter. Thank you for your continuing attention to this. Please call me if you have any questions, or require any amendments to this proposal.

Very truly yours,

Scott Levitan 

Scott Levitan

cc: E.J. Hall, E. Straub
H. Corinha
File: TOA 3.540, SL Chrono

**Boston Water and
Sewer Commission**

10 Post Office Square
Boston, Massachusetts 02109
617-426-6046

TDH W+S
RECEIVED

SEP 04 1987



HALL, DAVISON & CO.

September 2, 1987

Hall, Davison & Company
20 University Road
Cambridge, MA 02138

Attn: Mr. Scott Levitan

RE: Parkside West
Sewage Holding Tank

Dear Mr. Levitan:

We have reviewed your letter of August 24, 1987 regarding a request for a modification to the requirement for a sewage holding tank for the Parkside West development. While this project will be required to utilize a holding tank until the New East Interceptor is completed, it will no longer be required to construct the holding tank within the Parkside West building as was proposed in the sanitary sewage study, but rather the tank may be built on an acceptable portion of the Parkside East property. Within 60 days of the date of this letter, Hall, Davison & Company shall submit to the Boston Water and Sewer Commission, for approval, a revised detailed section to the sanitary sewage study which indicates where an accessible location will be reserved for the holding tank on the Parkside East site and how an acceptable design is feasible for conveying sewage flows to the tank, detaining the required flows in the tank for the specified periods of time and discharging these flows from the tank into the sewerage system in Mason Street.

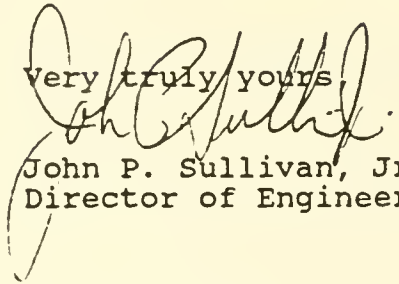
Presently, the New East Side Interceptor has been built as far as Summer Street (at South Station) and is being constructed between Summer Street and Rows Wharf. Construction of this section of the interceptor is planned to take place between the spring of 1987 and the spring of 1990. Upon completion and activation of this segment, the Parkside West project will no longer be required to use a sewage holding tank.

As your letter indicates, a meeting approximately six months prior to the planned 100 percent occupancy of Parkside West should be scheduled by you in order that the holding tank requirement can be effectively evaluated in relation to the extent of the completion of the New East Side Interceptor.



If we can provide you with any additional information,
please call.

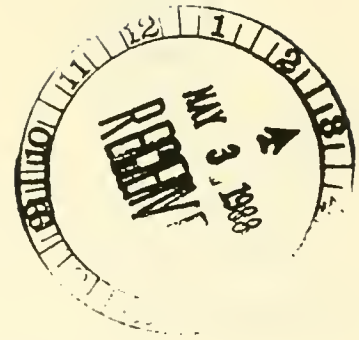
Very truly yours,


John P. Sullivan, Jr., P.E.
Director of Engineering

JPS/ED/gf



BOSTON EDISON
800 Boylston Street
Boston, Massachusetts 02199



April 29, 1988

Hall, Davison & Company
20 University Road
Cambridge, MA 02138
Attn: Michael S. Kelley

Re: Parkside East
165 Tremont Street
Boston, MA

Dear Mr. Kelley:

In response to your recent inquiry, sufficient electric capacity will be made available to the above mentioned development.

For any additional information on this matter, please call me at 617-421-2261.

Very truly yours,

Lawrence D. Denehy
District Sales Representative
Energy Services Department

LDD/mb



New England Telephon

A ~~NYNEX~~ Company

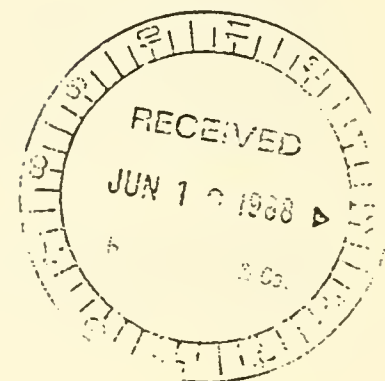
1070 Hancock Street
Floor 4
Quincy, Massachusetts 02169
Phone (617) 847-9066

June 7, 1988

Hall, Davidson & Company
20 University Road
Cambridge, MA 02138

Attention: Mr. Michael S. Kelley

Subject: Tremont Street Parcels



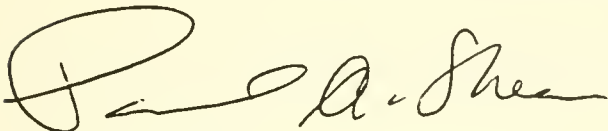
Dear Mr. Kelly,

We have reviewed your site plans for the two parcels on Tremont Street and would like to make the following comments:

- (1) Telephone services will be provided to our customers within your buildings in accordance with the tariff regulations now in effect.
- (2) In order that we may allocate adequate facilities for each building, we will require that you provide us with specific details of the total square footage to be rented in each building as office space, retail space and/or number of living units.
- (3) The point of entrance into each building should be identified in the very near future so that we may complete our conduit work in the public way with adequate time for cable placement. There is no mainline telephone conduit on Tremont Street and all entrances must be built from Mason Street.
- (4) The Telephone Company will construct all conduits in the public way according to the tariffs and the City of Boston's design requirements. The building owner will be required to provide all conduits, sleeves, holes or carrying plant within the property line. The building owner's conduits must extend beyond the property line an adequate amount to allow the connection with the Telephone Company's conduit.

- (5) All plans for distribution systems within the building including space for electrical protection, grounds, sleeves, holes, conduits, trays, backboards and space for telephone terminals should be reviewed with Mr. Robert Kelley, BICS Coordinator.
- (6) Any adjustments required to be made to the existing Telephone Company Network in the public way must be negotiated for. Relocations or adjustments of a minor nature may be considered. However, it is not possible to make major adjustments. The Telephone Company will expect full reimbursement for the cost of any adjustment no matter how small that expense may be.

Should you require any additional information in this matter, please direct any correspondence to Mr. Robert Kelley, BICS Coordinator. We stand ready to assist you with your project as we have already done in the past.

A handwritten signature in dark ink, appearing to read "Paul Shea". The signature is fluid and cursive, with a large initial "P" and a long, sweeping underline.

Paul Shea
Engineer

cc: Mr. Richard Andrade
Ms. Tana McDuffy
Mr. Robert Kelley

BOSTON FIRE DEPARTMENT-FIRE PREVENTION DIVISION

PERMIT

PERMIT NUMBER: 201970
ISSUED : 06/20/88
START : 07/01/88
EXPIRES: 07/01/89

Name: TREMONT PLACE REALTY TRUST
Address: 20 UNIVERSITY RD CAMBRIDGE

Phone: 5767615

In accordance with the provisions of Chapter 28 of the Ordinances of 197 known as the Boston Fire Prevention Code and amendments thereto, this permit is granted to be exercised at

165 TREMONT ST BOSTON Fire District: 3

Subject to compliance with the applicable provisions of said Code and with the safeguards and other conditions herein prescribed, to conduct the following business:

CONSTRUCT A NEW BUILDING CONDOS AND RETAIL

and/or for the keeping, storage, use, sale, or manufacture of the following hazardous materials:

NEW CONSTRUCTION 767.33 19 FLS 1468330 CF

Safeguards and Conditions Prescribed:

COMPLY WITH THE PROVISIONS OF THE BOSTON FIRE PREV. CODE ARTICLE 7
MAINTAIN AND POST ALL NECESSARY LICENSES AND PERMITS FROM CONTRACTORS AND SUB-CONTRACTORS.

The person accepting this permit shall conform to the Statutes of the Commonwealth of Massachusetts Fire Prevention Regulations, the Boston Fire Prevention Code, the Ordinances of the City of Boston and the conditions of this permit. This permit may be revoked at any time by the Head of the Fire Department; a violation of any of its conditions shall work an immediate revocation of the permit. The person to whom this permit is issued shall indemnify and save harmless the City of Boston from any damage it may sustain, or be required to pay by reason of the exercise of this permit, or by reason of any act or neglect of himself or any of his employees or agents relating to the exercise of this permit or by reason of any violation of any condition of this permit.

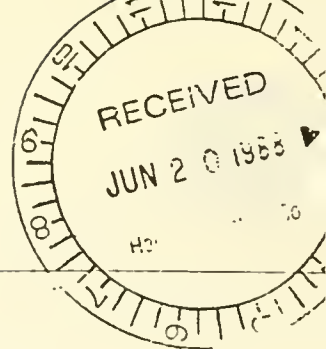
Granted by: Leo D. Stapleton Fire Commissioner

Attest: James J. Murphy, Jr. Inspector

This is an ORIGINAL PERMIT and MUST AT ALL TIMES BE KEPT POSTED on the PREMISES. - renewal certificate must be obtained annually from the BOSTON FIRE DEPARTMENT.



Boston Gas Company
201 Rivermoor Street
Boston, Massachusetts 02132
Telephone (617) 323-9210



Hall, Davison & Company
20 University Road
Cambridge, MA 02138

Attn: Michael S. Kelley

June 15, 1988

This letter is confirmation of your inquiry for gas availability for 165 Tremont Street,
Boston.

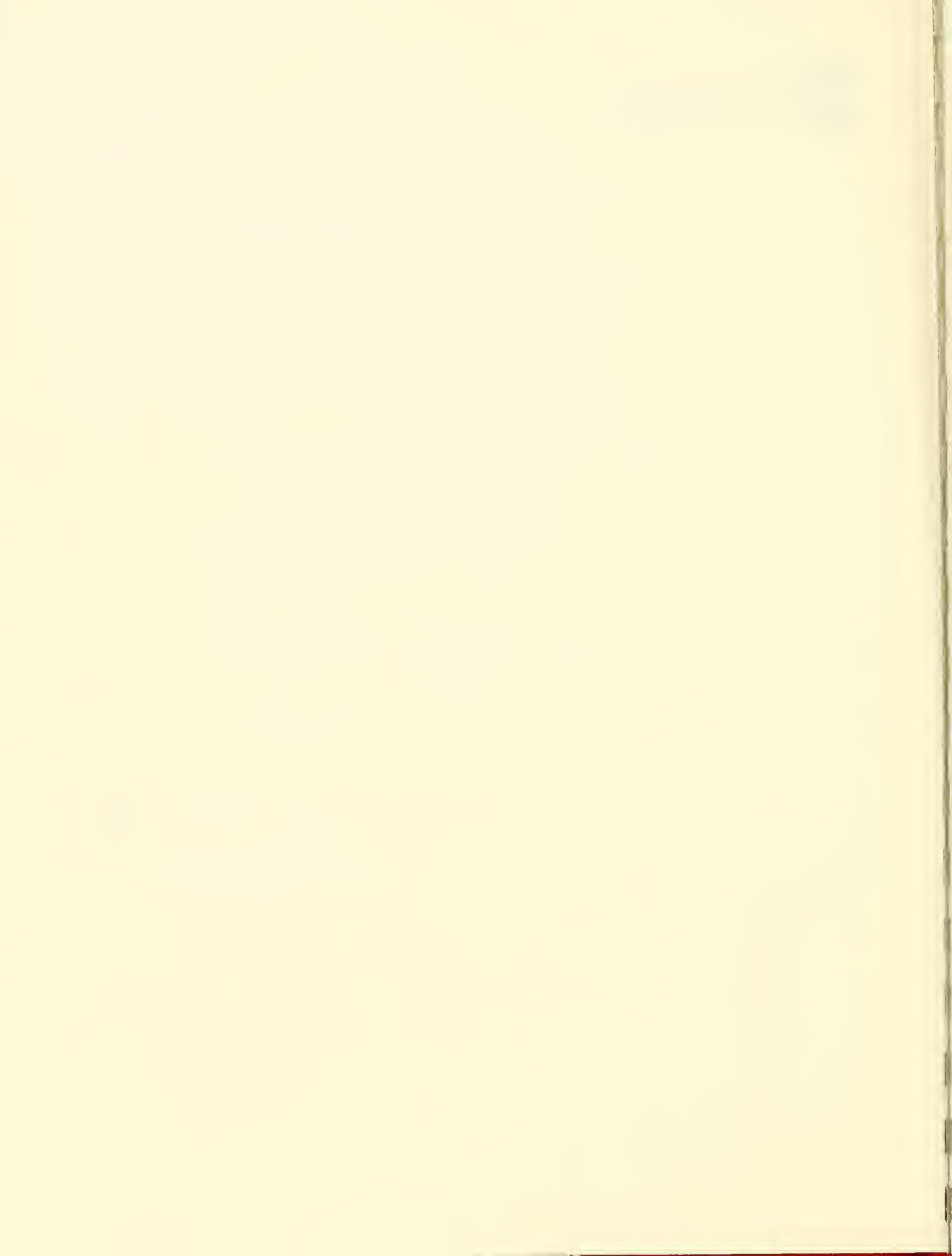
Natural gas is available in the amount of 11,470 MSTuh at 4" water column pressure at the outlet side of the meter.

When gas requirements are confirmed to include mains, supplies and metering, we will prepare a written Sales Agreement, including all construction charges, which is needed to commit this gas load.

If you have any questions, please feel free to call me at 323-9210.

Sincerely,

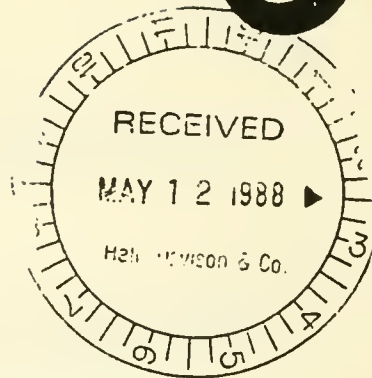
Richard J. Fogarty
Commercial Representative



**Boston Water and
Sewer Commission**

425 Summer Street
Boston, MA 02210-1700
617-330-9400

May 5, 1988



Mr. Michael S. Kelley
Hall, Davison & Company
20 University Road
Cambridge, MA 02138

Re: Proposed Development at Parkside East (165 Tremont
Street) and Parkside at Mason Place (172 Tremont Street)

Dear Mr. Kelley:

In response to your recent submittal regarding the above
referenced developments, we are providing the following
information for your use.

Parkside East (165 Tremont Street)

This project will be required to discharge its wastewater
into an existing 15 inch combined sewer which runs along
Mason Street to Avery Street. Please be advised that this sewer
is tributary to the East Side Interceptor and hence, this project
will be subject to the Boston Water and Sewer Commission's sewage
holding tank requirements until such time as construction of the
New East Side Interceptor permits this requirement to be
rescinded. At present, the section of the Interceptor to which
this project is tributary is under construction and is scheduled
for completion in the Spring of 1990. The Mason Street sewer is
in questionable condition and is currently under contract to have
two access manholes constructed on it and to be cleaned and
inspected. The results of this inspection will determine the type
and extent of repairs needed to restore this sewer. However, as a
result of the ongoing construction at Parkside West (170 Tremont
Street), the commencement of this work has been requested by that
project to be delayed until some time this summer. Consequently,
until this inspection contract is completed, it is not possible
to determine what magnitude of excess capacity exists in this
sewer. The sewer will have sufficient capacity to handle all
tributary flows once it is restored without any adverse
consequences.

A 16 inch high service water main is available for domestic
water and for fire protection in Tremont Street and a 12 inch high
service water main is available for domestic water and for fire
protection in Mason Street. The Parkside West Project utilized



the Tremont Street water main as its source of domestic water and for its fire protection. Adequate supply is available in this main for the subject project.

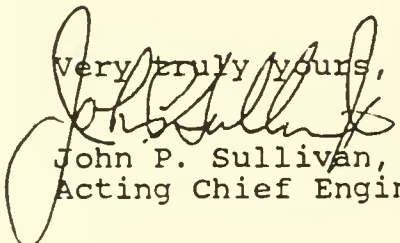
Parkside at Mason Place (172 Tremont Street)

The sewer information provided for the Parkside East Project applies to this Project, except that due to the indicated sewage flow to be generated from it, a sewage holding tank is not required for this Project.

Upon a complete review of these projects and the satisfactory fulfillment of all Boston Water and Sewer Commission site plan requirements by Hall, Davison and Company, these projects will be issued a sewer connection permit.

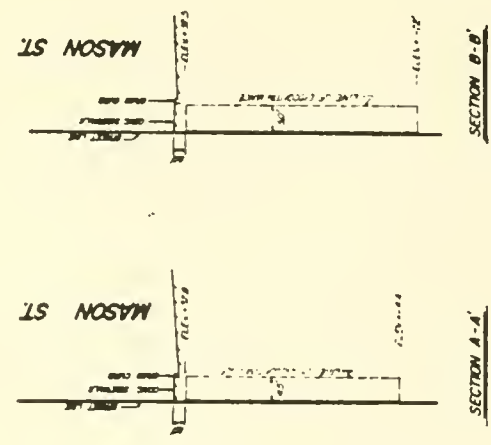
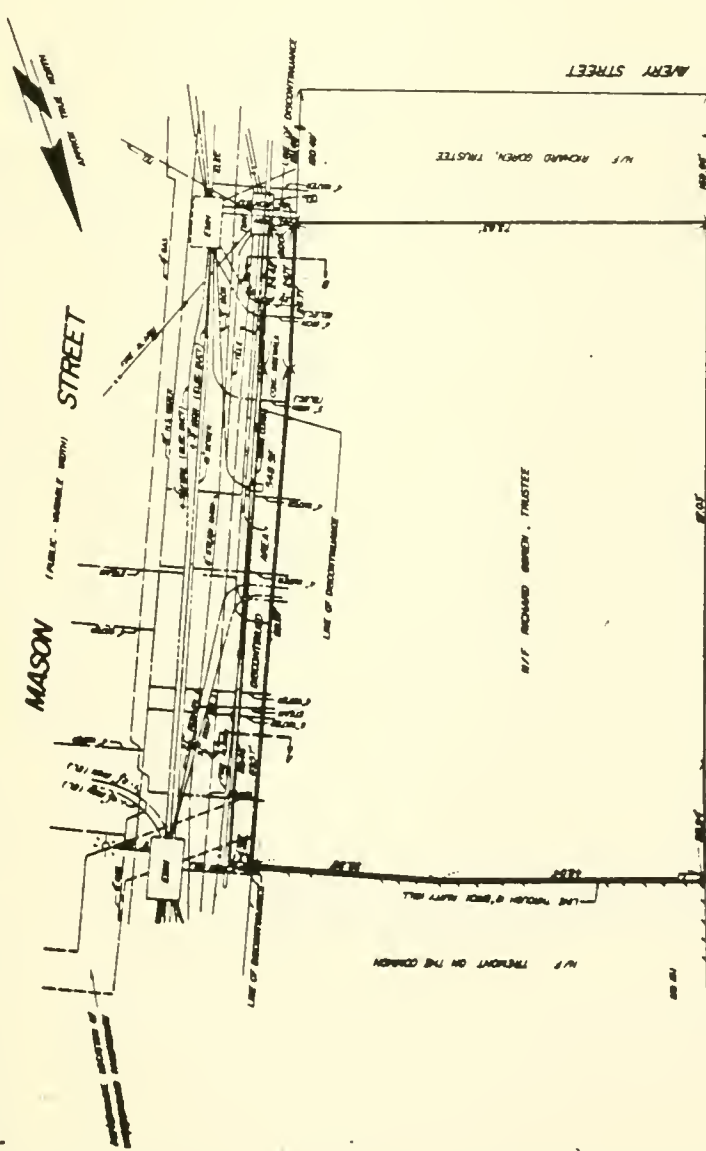
If we can be of any further assistance in this matter, please call.

Very truly yours,


John P. Sullivan, Jr., P.E.
Acting Chief Engineer

JPS/ED/gf

Exhibit B



After studying the plans and specifications of a portion of Mason Street, the Board of Public Works has approved the proposed plan for the widening of the street and the construction of a new sidewalk on the north side of the street. The plan is subject to the approval of the City Council and the City Engineer.

CITY OF BOSTON PUBLIC WORKS DEPT.
ENGINEERING DIVISION
DISCONTINUANCE PLAN
VERTICAL

MASON STREET
BOSTON
MASS.

JUNE 9, 1900

APPROVED BY
HARRY E. FIDELL, INC.
LAND SURVEYORS
112 BROADWAY
BOSTON, MASS.

DESIGNED FOR BOSTON ENGINEERING & CONSTRUCTION CO. BY CITY ENGINEER

PUBLIC WORKS DEPARTMENT

APPROVED BY
HARRY E. FIDELL, INC.
LAND SURVEYORS
112 BROADWAY
BOSTON, MASS.

APPROVED
CHIEF ENGINEER OF PUBLIC WORKS

1. CITY ENGINEER HAS THIS PLAN AND SPECIFICATIONS IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE BOARD OF PUBLIC WORKS FOR BOSTON CITY

PUBLIC INFORMATION COMMISSION
CHIEF ENGINEER
COMMISSIONER OF PUBLIC WORKS



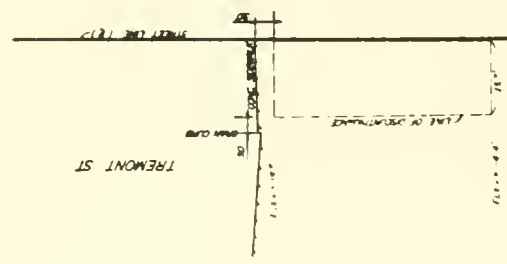
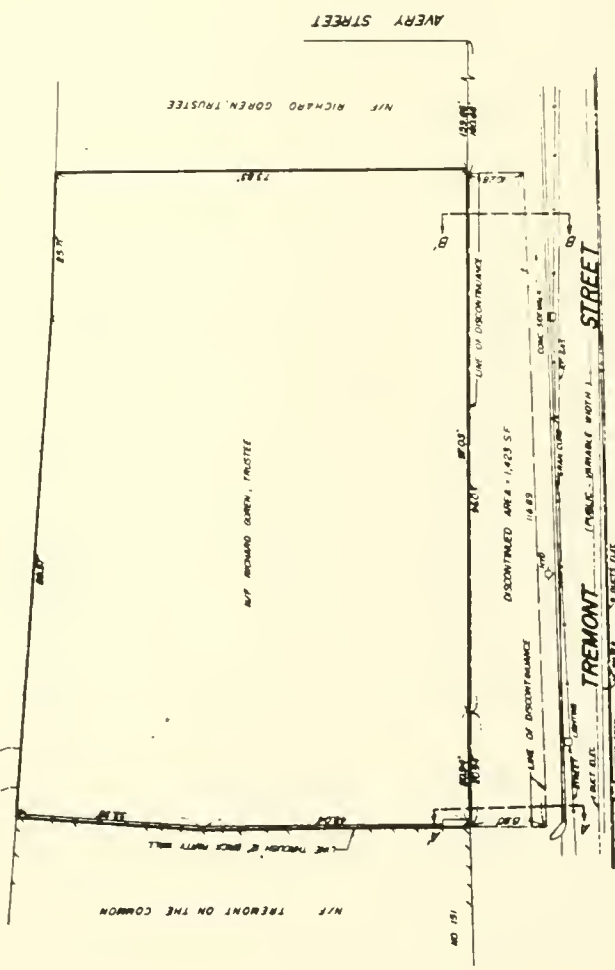
Reapproved



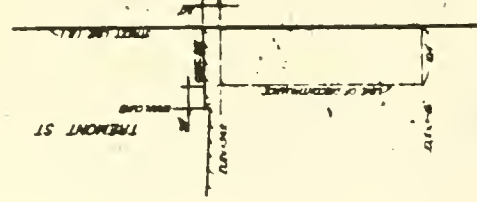
MASON STREET
(PUBLIC - VARIABLE WIDTH)

STREET

APPROXIMATE LOCATION
OF UNDERGROUND
CONDUITS



SECTION A-A'



SECTION B-B'

This plan is a reproduction of the original plan of the
Boston Public Works Department, and is not to be
used for any other purpose without the written
consent of the City of Boston. It is not to be
used for any other purpose without the written
consent of the City of Boston. It is not to be
used for any other purpose without the written
consent of the City of Boston.

CHECKED FOR GENERAL DESIGN & CONFORMANCE
TO CITY STANDARDS

CITY OF BOSTON PUBLIC WORKS DEPT.
ENGINEERING DIVISION
CONFORMANCE PLAN

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN
COMFORMANCE WITH THE RULES AND REGULATIONS OF THE
COMMISSIONERS OF THE BUREAU OF PUBLIC WORKS



PUBLIC IMPROVEMENT COMMISSION

CHIEF ENGINEER

APPROVED
COMMISSIONER OF PUBLIC WORKS

PUBLIC WORKS DEPARTMENT

PREPARED BY:
HARRY A. FLEMING, INC.
100 STATE STREET
BOSTON, MASS.

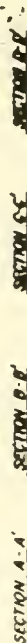
APPROVED

COMMISSIONER OF PUBLIC WORKS

TREMONT STREET
SECTION B-B'

JUNE 8, 1930

ENGINEER



Plain showing discontinuance of porifera of Trenton Street, (MONTGOMERY) on easterly side, respectively 187.31', 187.49', 242.45', 214.45', 228.45', and 248.45' from northerly side of Montgomery Street, vertically respectively from elev. -49.0 to elev. -23.0, from elev. -45.0 to elev. -177.0; from elev. -54.0 to elev. -183.0; from elev. -54.0 to elev. -187.0; from elev. -54.0 to elev. -177.0; and from elev. -54.0 to elev. -177.0.

ALTERNATIVE TO THE CONVENTION ON THE RIGHTS OF THE CHILD

CITY OF NEW YORK
COUNTY OF NEW YORK

TREMONT STREET

Aug 9, 1904

THE UNIVERSITY OF CHICAGO
LIBRARY
540 EAST 57TH STREET
CHICAGO, ILL. 60637

01/20/2010

WILLIAM J. HAY

I CERTIFY THAT THIS FORM WAS PREPARED IN COMPLIANCE WITH THE RULES AND REGULATIONS OF THE COMMISSION OF DOMESTIC FINANCIAL SECURITY



1

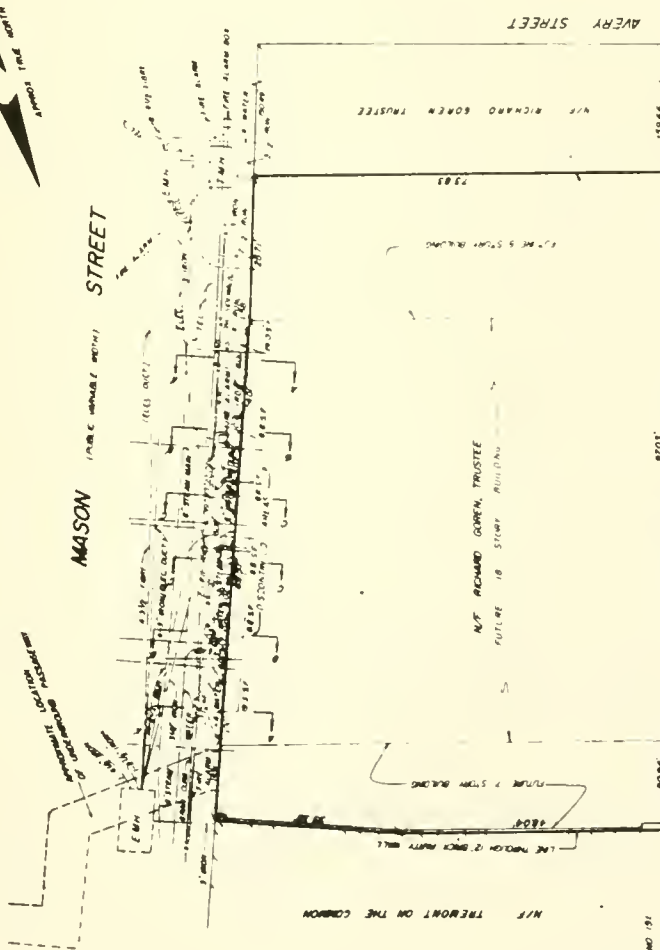
Table 1. *Antibiotic resistance patterns of *Staphylococcus aureus* isolates*

1000

Richard B. Ryland



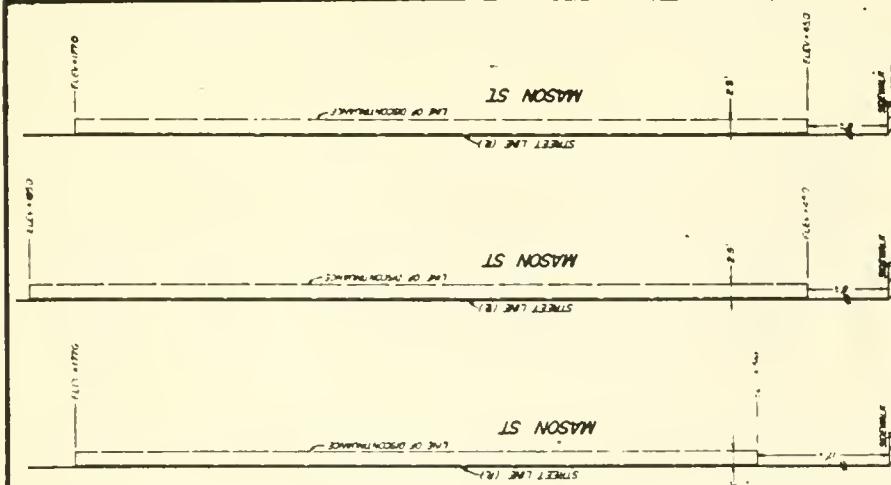
MASON STREET (PUBLIC OWNERS: CITY)



TREMONT STREET

STREET

AVERY STREET



Plan showing discontinuities of portions of Mason Street, BOSTON PROPER, on westerly side, respectively: 177.78', 192.70', 204.81', 216.83', 228.85' and 239.86' from northerly side of Avery Street, vertically respectively: from elev. +45.0 to elev. +177.0, from elev. +45.0 to elev. +185.0, from elev. +54.0 to elev. +177.0, from elev. +54.0 to elev. +177.0, from elev. +45.0 to elev. +185.0 and from elev. +45.0 to elev. +177.0.

CITY OF BOSTON PUBLIC WORKS DEPT.
ENGINEERING DIVISION
DISCONTINUITY PLAN
VERTICAL

MASON STREET
BOSTON PROPER

DATE: JUNE 2, 1908
DRAWN BY: HARRY P. FELDMAN, D.C.
FOR: LAND SURVEYOR
BY: HARRY P. FELDMAN, D.C.
BOSTON, MASS.

CHECKED FOR GENERAL DESIGN & CONFORMITY TO CITY STANDARDS
PUBLIC WORKS DEPARTMENT

APPROVED BY: HARRY P. FELDMAN, D.C.
COMMISSIONER OF PUBLIC WORKS

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE BOARD OF ENGINEERS FOR THE CITY OF BOSTON.

Robert J. Appleby
CHIEF ENGINEER

APPROVED
COMMISSIONER OF PUBLIC WORKS

APPROVED
COMMISSIONER OF PUBLIC WORKS

155

In Public Improvement Commission of the City of Boston, October 23 1986
Ordered:—That due notice be given, that this Commission is of the opinion that in said city, a public improvement should be made, consisting of the discontinuance of MASON STREET, Boston Proper District, from Tremont Street approximately 75 feet easterly

.....substantially as shown on a plan in the office of this Commission, that it intends to pass an order for making said improvement, and that it appoints 10:00 o'clock A. M., of November 6, 1986
and the office of this Commission as the time and place for a public hearing in the matter.

A true copy of an order passed by said Commission on said day.

ATTEST:

..... Executive Secretary

In Public Improvement Commission, of the City of Boston, February 5, 1987
Ordered:—That this Commission, having passed the order of notice relating to the public improvement hereinafter described, and having caused a copy of said order to be published October 25, 1986, and October 27, 1986, in the Boston Globe and the Boston Herald two daily newspapers published in the City of Boston, and having given the public hearing, notice of which was given in said order, and being of the opinion that public convenience so requires, does hereby order the making, in said city of the public improvement, shown on a plan, marked "City of Boston, Public Works Department, Engineering Division, Discontinuance Plan, Mason Street, Boston Proper District, February 3, 1987, Gordon Barnes, Division Engineer

deposited in the office of the Engineering Division, Public Works Department, of said city and named, bounded and described as follows:

A highway named MASON STREET is hereby discontinued as a public highway, from Tremont Street approximately 71 feet easterly.

Said MASON STREET as hereby discontinued is bounded:

Northerly by the northerly line of Mason Street, seventy-one and 47/100 feet; easterly by the westerly line of Mason Street, twenty-nine and 01/100 feet, southerly by the southerly line of Mason Street, by two measurements, eighteen and 10/100 feet, and fifty-six and 20/100 feet; and westerly by the easterly line of Tremont Street, thirty-one and 05/100 feet: containing two thousand one hundred forty-eight square feet more or less.

agb

PUBLIC IMPROVEMENT COMMISSION

Raymond L. Flynn

13661 275

In Public Improvement Commission of the City of Boston, October 23, 1986
Ordered:—That due notice be given, that this Commission is of the opinion that, in said city, a public improvement should be made, consisting of the discontinuance of a portion of MASON STREET, Boston Proper District, on the westerly side, from Mason Street approximately 96 feet northerly, vertically below the sidewalk.

.....substantially as shown on a plan in the office of this Commission, that it intends to pass an order for making said improvement, and that it appoints 10:00 o'clock A. M., of November 6, 1986, and the office of this Commission as the time and place for a public hearing in the matter.

A true copy of an order passed by said Commission on said day.

ATTEST:

Executive Secretary

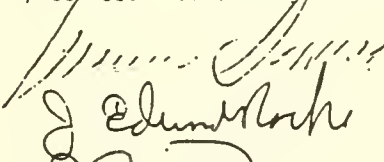
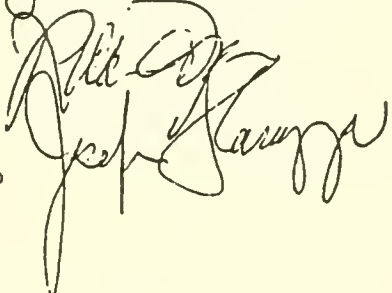
In Public Improvement Commission, of the City of Boston, February 5, 1987
Ordered:—That this Commission, having passed the order of notice relating to the public improvement hereinafter described, and having caused a copy of said order to be published October 25, 1986, and October 27, 1986, in the Boston Globe and the Boston Herald two daily newspapers published in the City of Boston, and having given the public hearing, notice of which was given in said order, and being of the opinion that public convenience so requires, does hereby order the making, in said city of the public improvement, shown on a plan, marked "City of Boston, Public Works Department, Engineering Division, Discontinuance Plan, Mason Street, Boston Proper, February 3, 1987, Gordon Barnes, Division Engineer

deposited in the office of the Engineering Division, Public Works Department, of said city, and named, bounded and described as follows:

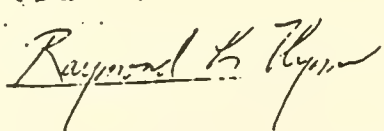
A portion
.....of a highway..... named MASON STREET..... is hereby discontinued as a public highway, from Mason Street approximately 96 feet northerly, vertically below the sidewalk.

Said portion of MASON STREET as hereby discontinued is bounded:

Northerly by the westerly line of Mason Street, at the intersection of Mason Street and Mason Street, eighty and 06/100 feet; easterly by Mason Street, five and 00/100 feet; southerly by Mason Street, ninety-six and 05/100 feet; westerly by Mason Street, two and 36/100 feet; and northerly by Mason Street, sixteen and 14/100 feet: containing four hundred eighty-nine square feet more or less.



agb

PUBLIC IMPROVEMENT COMMISSION



FEB 05 1987

In Public Improvement Commission of the City of Boston, October 23, 1986 1986
Ordered.—That due notice be given, that this Commission is of the opinion that, in said city, a public improvement should be made, consisting of the discontinuance of a portion of TREMONT STREET, Boston Proper District, on the easterly side, from the intersection of Mason Street approximately 95 feet northerly;

substantially as shown on a plan in the office of this Commission, that it intends to pass an order for making said improvement, and that it appoints 10:00 o'clock A. M., of November 6, 1986 and the office of this Commission as the time and place for a public hearing in the matter

A true copy of an order passed by said Commission on said day.

ATTEST:

Executive Secretary

In Public Improvement Commission, of the City of Boston, February 3, 1987 1987
Ordered.—That this Commission, having passed the order of notice relating to the public improvement hereinafter described, and having caused a copy of said order to be published October 25, 1986 and October 27, 1986 in the Boston Globe and the Boston Herald two daily newspapers published in the City of Boston, and having given the public hearing, notice of which was given in said order, and being of the opinion that public convenience so requires, does hereby order the making, in said city of the public improvement, shown on a plan, marked "City of Boston, Public Works Department, Engineering Division, Discontinuance Plan, Tremont Street, Boston Proper, February 3, 1987, Gordon Barnes, Division Engineer.

deposited in the office of the Engineering Division, Public Works Department, of said city, and named, bounded and described as follows:

A portion of a Highway named TREMONT STREET is hereby discontinued as a public highway, on the easterly side, from the intersection of Mason Street approximately 95 feet northerly.

Said portion of TREMONT STREET as hereby discontinued is bounded:

Easterly by the line of Tremont Street, ninety-five and 83/100 feet; southerly by the line of Tremont Street, eight and 98/100 feet; westerly by the line of Tremont Street, ninety-five and 81/100 feet; and northerly by the line of Tremont Street ten and 28/100 feet: containing nine hundred and seven square feet more or less.

[Handwritten signature]
Edmund Burke
Joseph S. S. S. S. S.
agb

PUBLIC IMPROVEMENT COMMISSION

[Handwritten signature]
Raymond B. Flynn

In Public Improvement Commission of the City of Boston, October 23, 1986 ~~xxx~~
Ordered:—That due notice be given, that this Commission is of the opinion that, in said city, a public improvement should be made, consisting of the discontinuance of portions of MASON STREET, Boston Proper District, from a point approximately 2 feet north of Mason Street approximately 12 feet northerly; from a point approximately 29 feet north of Mason Street approximately 23 feet northerly; and from a point approximately 66 feet north of Mason Street approximately 11 feet northerly, vertically above the sidewalk, substantially as shown on a plan in the office of this Commission, that it intends to pass an order for making said improvement, and that it appoints 10:00 o'clock A. M., of November 6, 1986 ~~xxx~~, and the office of this Commission as the time and place for a public hearing in the matter.

A true copy of an order passed by said Commission on said day.

ATTEST:

Executive

Secretary

In Public Improvement Commission, of the City of Boston, February 5, 1987. ~~xxx~~
Ordered:—That this Commission, having passed the order of notice relating to the public improvement hereinafter described, and having caused a copy of said order to be published October 25, 1986 ~~xxx~~, and October 27, 1986 ~~xxx~~, in the Boston Globe and the Boston Herald, two daily newspapers published in the City of Boston, and having given the public hearing, notice of which was given in said order, and being of the opinion that public convenience so requires, does hereby order the making, in said city of the public improvement, shown on a plan, marked "City of Boston, Public Works Department, Engineering Division, Discontinuance Plan, Mason Street, Boston Proper, February 3, 1987, Gordon Barnes, Division Engineer."

deposited in the office of the Engineering Division, Public Works Department, of said city, and named, bounded and described as follows:

Portions of
a highway named MASON STREET is hereby discontinued
from a point approximately 2 feet north of Mason Street approximately 12 feet northerly; from a point approximately 29 feet north of Mason Street, approximately 23 feet northerly; and from a point approximately 66 feet north of Mason Street approximately 11 feet northerly, vertically above the sidewalk.

Said portions of MASON STREET as hereby discontinued is bounded:

Westerly by the line of Mason Street, eleven and 00/100 feet; northerly by the line of Mason Street, three and 50/100 feet; easterly by the line of Mason Street, eleven and 00/100 feet; southerly by the line of Mason Street, three and 50/100 feet; westerly by the line of Mason Street, twenty-two and 50/100 feet; northerly by the line of Mason Street three and 50/100 feet; easterly by the line of Mason Street, twenty-two and 50/100 feet; southerly by the line of Mason Street, three and 50/100 feet; westerly by the line of Mason Street, eleven and 00/100 feet; northerly by the line of Mason Street, three and 50/100 feet; easterly by the line of Mason Street,

12/1/86

12/1/86
12/1/86
12/1/86

six square feet more or less.

PUBLIC IMPROVEMENT COMMISSION

Raymond L. Hyman

ГГВ 05 199

CITY OF BOSTON
IN CITY COUNCIL

JUN 2 11 57 AM '87

Rec'd City
REGISTER

WHEREAS, under date of October 3, 1986, Tremont Place Realty Trust petitioned the Public Improvement Commission to discontinue the following portion of Mason Street:

Mason Street, Boston Proper District, from Tremont Street, approximately 75 feet easterly;

a portion of Mason Street, Boston Proper District, on the westerly side, from Mason Street approximately 95 feet northerly, vertically below the sidewalk;

a portion of Mason Street, Boston Proper District, from a point approximately 2 feet north of Mason Street approximately 12 feet northerly, vertically above the sidewalk;

a portion of Mason Street, Boston Proper District, from a point approximately 29 feet north of Mason Street, approximately 23 feet northerly, vertically above the sidewalk;

a portion of Mason Street, Boston Proper District, from a point approximately 66 feet north of Mason Street approximately 11 feet northerly, vertically above the sidewalk;

a portion of Tremont Street, Boston Proper District, on the easterly side, from the intersection of Mason Street approximately 96 feet northerly;

all as described on a certain plan marked "City of Boston, Public Works Department, Engineering Division, Discontinuance Plan, Mason Street, Boston Proper, February 3, 1987, Gordon Barnes, Division Engineer;"

WHEREAS, a duly authorized public hearing was held on January 29, 1987 for the proposed discontinuance, all abutters having been notified by certified mail of said hearing; and

Box 35

WHEREAS, the Commissioner has determined that the land lying within the discontinued area occurred in fee by City of Boston comprising Three Thousand Seven Hundred (3,700) square feet no longer required for public purposes, and further that said discontinued area has a fair market value of \$177,000.00; now therefore it is

ORDERED, that the Mayor of the City of Boston be and he hereby is authorized to execute and deliver to the Tremont Street Realty Trust for the sum of \$177,000.00 an instrument in writing conveying all of the City of Boston's right, title and interest in and to the discontinued area as herein described.

I HEREBY CERTIFY THAT THE
FOREGOING, IF PASSED IN THE
ABOVE FORM, WILL BE IN
ACCORDANCE WITH LAW.

Joseph M. Sullivan
CORPORATION COUNSEL

In City Council MAY 25 1987
Read once and passed yes eleven, nay none

[Signature] City Clerk

In City Council APR 8 1987
Read and time and again passed yes eleven, nay none

Raymond C. Flynn
City Clerk

DEED

WHEREAS, by an Order of City of Council of the City of Boston read and passed March 25, 1987 and read and passed for a second time April 8, 1987 and approved by the Mayor of the City of Boston on April 14, 1987 the Mayor of the City of Boston is authorized to sell for one hundred seventy seven thousand dollars (\$177,000.00) to the Tremont Place Realty Trust the following described parcel of land.

NOW THEREFORE, the City of Boston, a municipal corporation duly authorized and existing under the laws of the Commonwealth, in consideration of the sum of one hundred seventy seven thousand dollars (\$177,000.00) to it paid the receipt whereof is hereby acknowledged, does hereby grant to Richard A. Gorin and Thomas Piatt, trustees of Tremont Place Realty Trust, created under a declaration of trust dated February 15, 1985 and recorded in Suffolk County Registry of Deeds in Book 11412, Page 199 all of the City of Boston's right, title and interest to the following described parcels of land.

1. A highway named MASON STREET from Tremont Street approximately 71 feet easterly.

Said MASON STREET as discontinued is bounded:

Northerly by the northerly line of Mason Street, seventy-one and 47/100 feet; easterly by the westerly line of Mason Street, twenty-nine and 01/100 feet; southerly by the southerly line of Mason Street, by two measurements, eighteen and 10/100 feet, and fifty-six and 20/100 feet; and westerly by the easterly line of Tremont Street, thirty-one and 05/100 feet; containing two thousand one hundred forty-eight square feet more or less.

2. A portion of a highway named TREMONT STREET on the easterly side, from the intersection of Mason Street approximately 96 feet northerly, vertically below the sidewalk.

Said portion of TREMONT STREET as discontinued is bounded:

Easterly by the line of Tremont Street, ninety-five and 83/100 feet; southerly by the line of Tremont Street, eight and 95/100 feet; westerly by the line of Tremont Street, ninety-five and 81/100 feet; and northerly by the line of Tremont Street ten and 28/100 feet; containing nine hundred and seven square feet more or less.

3. A portion of a highway named MASON STREET from Mason Street approximately 96 feet northerly, vertically below the sidewalk.

Said portion of MASON STREET as discontinued is bounded:

Northerly by the westerly line of Mason Street, at the intersection of Mason Street and Mason Street, eighty and 06/100 feet; easterly by Mason Street, five and 00/100 feet; southerly by Mason Street, ninety-six and 05/100 feet; westerly by Mason Street, two and 36/100 feet; and northerly by Mason Street, sixteen and 14/100 feet; containing four hundred eighty-nine square feet more or less.

4. Portions of a highway named MASON STREET from a point approximately 2 feet north of Mason Street approximately 12 feet northerly; from a point approximately 29 feet north of Mason Street, approximately 23 feet northerly; and from a point approximately 66 feet north of Mason Street approximately 11 feet northerly, vertically above the sidewalk.

Said portions of MASON STREET as discontinued is bounded:

Westerly by the line of Mason Street, eleven and 00/100 feet; northerly by the line of Mason Street, three and 50/100 feet; easterly by the line of Mason Street, eleven and 00/100 feet; southerly by the line of Mason Street, three and 50/100 feet; westerly by the line of Mason Street, twenty-two and 50/100 feet; northerly by the line of Mason Street three and 50/100 feet; easterly by the line of Mason Street, twenty-two and 50/100 feet; southerly by the line of Mason Street, three and 50/100 feet; westerly by the line of Mason Street, eleven and 00/100 feet; northerly by the line of Mason Street, three and 50/100 feet; easterly by the line of Mason Street, eleven and 00/100 feet; and southerly by the line of Mason Street, three and 50/100 feet; from elevation 57.4 to elevation 187.9; containing one hundred fifty-six square feet more or less.

All of the above containing three thousand seven hundred (3,700) square feet more or less and being shown a plan entitled "City of Boston, Public Works Department, Engineering Division, Discontinuance Plan, Mason Street, Boston Proper, October 3, 1987, Gordon Barnes, Division Engineer" recorded with Suffolk County Registry of Deeds on May 8, 1987 ~~and being~~ with Instrument No. 465

This deed is given in full compliance with the provisions of General Laws Chapter 44, Section 63A.

IN WITNESS WHEREOF, the City of Boston has caused its corporate seal to be hereto affixed and these presents to be signed in its name and behalf by Raymond L. Flynn, Mayor of the City of Boston, this 21 day of April, 1987.

CITY OF BOSTON,

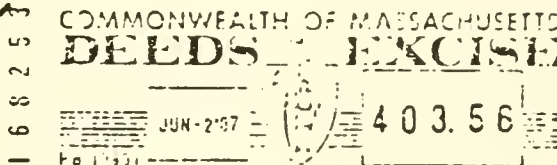
By:

Raymond L. Flynn
Raymond L. Flynn
Mayor

Approved as to form:

Michael J. [Signature]
Corporation Counsel

CANCELLED



COMMONWEALTH OF MASSACHUSETTS


Suffolk, ss.

Boston, Massachusetts
April 21, 1987

Then personally appeared the above-named Raymond L. Flynn, Mayor of the City of Boston, and acknowledged the foregoing instrument to the free act and deed of the City of Boston.

Michael J. [Signature]

Exhibit C


BOSTON EDISON
800 Boylston Street
Boston, Massachusetts 02199

March 30, 1988

0
RECEIVED
MAY 1 1988
HALL, DAVISON & CO.

Michael S. Kelley
Hall, Davison & Company
20 University Road
Cambridge, MA 02138

RE: PARKSIDE - 345KV TRANSMISSION LINE

Dear Mike:

Per your request, I am going to give you an update of our proposed construction of the above referenced line as it pertains to Parkside. As previously mentioned, a review of your "as-built" of utilities within the discontinued portion of Mason Street, showed that there was very little remaining space between the new telephone and fire alarm ducts and the connector tunnel roof. Also, your field engineers located a row of soldier beams still in place along with the lagging that was used to construct the foundation for the Daughters of St. Paul building. These beams and the marginal space above the tunnel roof would make the construction of our pipe cable transmission line very difficult.

Consequently, we sought to find a route revision to avoid using Mason Street. With the help of Scott Levitan we have, and it is shown on the attached sketch. You'll note that it requires us to be in the sidewalk and which results in a revised sidewalk transformer access proposed location for the Daughters of St. Paul building (to be renamed Parkside at Mason Street, I believe). Scott and our Distribution Division worked out the changes. So, it appears that we're well on our way with the revised route and will know more when we petition the City for approval.

Could you keep me appraised of the construction that will take place at "Parkside at Mason Street"? This would help to prevent any construction impact between yourself and us.

Sincerely,



Louis R. Delaplace, Principal Engineer
Transmission Division
EE & SO Department

Enclosure

LRD/tmh

xc: Mr. Scott Levitan - Parkside
Mr. Frank Martin
File

Mr. Peter Clarke
Mr. Robert Murphy

**Boston Water and
Sewer Commission**

425 Summer Street
Boston, MA 02210-1700
617-330-9400



February 1, 1988

Hall. Davison & Company
20 University Road
Cambridge, MA 02138

Attn: Mr. Michael S. Kelley

Re: 170 & 172 Tremont Street
B.W.S.C. No. 86-43 S/P

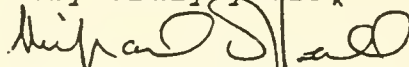
Dear Mr. Kelley:

We have reviewed your submittal of January 19, 1988 and we have the following comments:

1. On April 12, 1987 the Boston Water and Sewer Commission was granted an easement by Tremont Place Realty Trust for the purpose of installing a 16 inch drain line through the Parkside West Garage (#170 Tremont Street) from a new manhole in the Tremont Street sidewalk to a new manhole in the Mason Street sidewalk. All pertinent information concerning BWSC facilities in this area can be found on the site plan for the Parkside on Common (Parkside West) project, entitled "Utility Relocation Plan, Mason Street", prepared by HW Moore Associates, dated 9/24/86 with revisions dated 4/31/87 and it is available from Mr. Scott Levitan of your office.
2. A schedule, if available, should be provided for the planned submission of a site plan and sewer connection permit for the Parkside at Mason Place project. At that time, all issues pertaining to this project can be discussed. Mr. Peter Wong of the BWSC should be contacted for the site plan requirements, if needed.

If additional information is required from BWSC to assist you in this project, please contact Mr. Edward Duggan of my staff.

Very truly yours,


Michael O'Neill, P.E.
Division Engineer

MON/ED/gf

RECEIVED

FEB 10 1988

HALL, DAVIDSON & CO.

CABLEVISION

Hall, Davidson & Company
20 University Road
Cambridge, MA. 02138

February 10, 1988

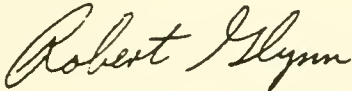
Attn: Mr. Michael Kelly

Dear Sir;

Cablevision of Boston has reviewed your site plan of the proposed underground connection at #170 Tremont Street and #172 Tremont Street in Boston.

Cablevision currently has no underground facilities within this project area and therefore has no objection to this construction.

Sincerely;



Robert Glynn
Cablevision of Boston

787-6730

**MASSACHUSETTS
BAY
TRANSPORTATION
AUTHORITY**

RECEIVED

Engineering & Maintenance Department
500 Arborway, Jamaica Plain, Ma. 02130

February 24 1988

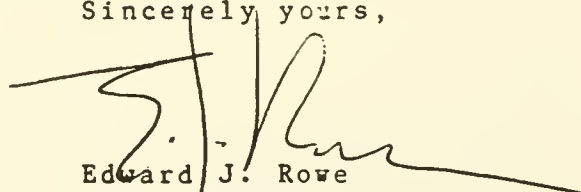
Mr. Michael S. Kelley
Hall Davidson & Company
20 University Road
Cambridge, MA 02438

Re: Parkside - 170 and
172 Tremont Street

Dear Mr. Kelley:

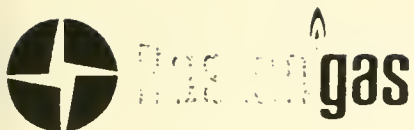
We have reviewed the sketches submitted with your letter of January 19, 1988, which detail the underground connection between the parking level of 170 Tremont Street and the basement level at 172 Tremont Street. The connector which lies only one level below the surrounding ground elevation will not affect any of the Authority's facilities or structures in the area. We therefore do not object to the construction of your proposed underground connection.

Sincerely yours,



Edward J. Rowe
Chief Engineer

AKM:mk



Boston Gas Company
201 Rivermoor Street
Boston, Massachusetts 02132
Telephone (617) 323-9210

HALL, DAVISON & CO.

Mr. Michael S. Kelley
Hall, Davison & Company
20 University Road
Cambridge, MA 02138

February 2, 1988

RE: BOSTON - "PARKSIDE" #170 AND #172 TREMONT STREET

Dear Mr. Kelley:

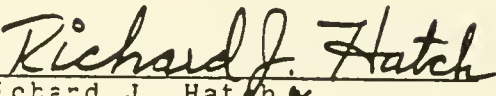
Your letter dated, January 19, 1988 with plans showing a proposed underground connection between Buildings #170 and #172 at the parking garage level, has been reviewed here with the following comments:

- The existing 6" main, installed in 1987 is shallow (1'-0" to 1'-6" below grade) and is steel pipe.
- The proposed construction between the two buildings will undermine and expose this gas main.
- Boston Gas Company has no objection to your proposed construction as long as some means is employed to adequately support this main during construction of the underground connection. Boston Gas Company must be notified just prior to your work so that we may confer with your Contractor on details of the proposed support method.
- This same gas main is to be relocated at some future date to make space available for a large electrical duct line. Whether the gas main is relaid before your project is underway is irrelevant to the protection required for the gas main.
- It would probably be better for us as well as you if the garage level work could be scheduled to be done before the gas main is relaid.

BOSTON - "PARKSIDE" #170 AND #172 TREMONT STREET

Please contact me, if you have any questions about this.

Very truly yours,


Richard J. Hatch *
Project Manager
Governmental Construction

RJH:GEK/tcc







BOSTON PUBLIC LIBRARY



3 9999 06315 278 7

